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*In co-operation with U. S. Dept. of Agriculture.

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*In co-operation with U. S. Dept. of Agriculture.

†Resigned.

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Session 1913-1914.

Discipline—President Hightower, Professors Walker Herbert, Logan, Brunson, Robert, Anding.

Library—Professors Walker, Herbert, Harned, Brunson.

Catalogue—Professors Herbert, Bowen, Harned, Gay, Ranck.

Examinations—Professors Logan, Patterson, Brown, Critz, Weddell.

Courses of Instruction—Professors Walker, Hand, Logan, Moore, Bowen, McKay, Harned, Reid, Brunson, Robert, Smith, Carpenter.

Classification of Students—Professors Walker, Herbert, Logan, Robert, Brunson.

Athletics—Professors Walker, Harned, Nelson, Scoates, Sessums.

Student Publications—Professors Bowen, Gay, Scoates, Chadwick, Weddell, Sessums, Critz.

Student Organizations—Professors Hand, Logan, Bowen, Smith, Brooks.

Campus and Buildings—Professors McKay, Gay, Smith, Carpenter, Marshall.

Entertainments—Professors Herbert, Brunson, Ranck.

Student Debates—Professors Bowen, Brooks, Davis, Weddell, Mellen.

GENERAL STATEMENT.

OBJECTS AND HISTORY OF THE COLLEGE.

The college owes its origin to an act of the general government, passed in 1862, to encourage the establishment of industrial colleges in the states to benefit "agriculture and the mechanic arts." This act, among other things, provides for the "endowment, support and maintenance in each state of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts in such manner as the legislatures of the states may respectively prescribe in order to promote the liberal and practical education of the industrial classes."

The status of the agricultural land scrip fund, donated by the United States government, is as follows: the scrip, representing 207,920 acres of public land, was sold for about ninety cents per acre, realizing in currency \$188,298. This amount, by judicious management, was increased to \$227-, 150, which is now in the state treasury, represented by thirty-two-year bonds, running from 1896 to 1928, bearing six per cent. interest per annum.

The legislature, by the act of February 28, 1878, divided the sum equally between Alcorn Agricultural and Mechanical College and this college, giving to each \$113,575. A subsequent legislature authorized the sale of \$15,000 worth of bonds to purchase lands; so that the amount now in the state treasury to the credit of this college is \$98,575, yielding an annual income of \$5,914.50.

The legislature of Mississippi, in accepting this endowment—a trust fund from the general government—prescribed the following in the powers given to the bond of trustees:

“The establishment and maintenance of a first-class institution, at which the youth of the state may acquire a common school education and a scientific and practical knowledge of agriculture, horticulture, and the mechanic arts; also, the proper growth and care of stock, without, however, excluding other scientific and classical studies, including military tactics.

“They shall regulate the course of study, rates of tuition, management of experimental farm, manner of performing labor, and the kinds of labor to be performed by students.”

The acts of the general and state governments plainly define the objects of the college. The “leading objects” must be to “benefit agriculture and the mechanic arts.” Should studies be taught other than such as relate to these interests, they are to be considered secondary, and rather as a means by which to comprehend more readily the sciences underlying agriculture and the mechanic arts.

The instruction at the college must be such as to educate and direct the minds and tastes of students to agriculture, horticulture, care and growth of stock, management of farms, manner of performing labor, and to the mechanic arts. The college is not to be in the strictest sense literary, classical, or military; but, rather, it is to be a college in which the industrial classes shall be given a general education, combined with such scientific and practical knowledge as will make them familiar with the nature of the objects and the forces with which they have to deal.

This necessitates that special stress should be laid on such sciences as underlie agriculture and the mechanic arts, viz: chemistry, botany, geology, zoology, entomology, physiology, mechanics, mathematics, physics, etc. To understand these properly, a very liberal culture, especially in English, is requisite. The various conditions contributing to an intelligent understanding of agriculture and

the mechanic arts comprehend an education as broad and liberal as that needed in mastering any profession. This education, however, must, of necessity, differ in kind. Students whose education is intended to promote the interests designated in the acts must omit some studies taught in other colleges, looking to a general or special training. This education, too, is to be practical and industrial: students must not only be familiar with farms, machinery for iron and woodwork, and tools, but they must also labor themselves, and in this labor find a part of their education, the object of which is to create a taste for agriculture and mechanical pursuits, and to fix and preserve habits of industry.

In conformity with the acts designated, the board of trustees located the Mississippi Agricultural and Mechanical College in Oktibbeha county, one and a half miles from the town of Starkville.

The college is on a permanent basis, the legislature having made ample provision for both agricultural and mechanical instruction, both in theory and practice. There are now provided four courses, agricultural, engineering, industrial education, and general science, all leading to the degree of Bachelor of Science in the collegiate department. There is also a two-year short course in agriculture which does not lead to a degree. The farm, creamery, stock barns, and sheds, gardens, orchards, and shops for instruction in wood and iron and foundry work, are ample for practical training.

The trustees have established a short industrial course, a two-year training course, a two-year short course in agriculture, and a collegiate course, which afford the youth of the state ample means of acquiring, in accordance with the law, a thorough elementary education and also a scientific and practical knowledge of agriculture and the mechanic arts.

The large number of students in attendance each year shows that the college supplies a long-felt want to the people of the state by giving a thoroughly practical education to its youth. It is evident that a large class of our people desire the young men of the state to combine manual labor and laboratory work with literary instruction; and this is a correct idea, where boys are to be educated for industrial pursuits. Training of this kind should be in connection with farm and shop, where industrious habits may be preserved or where such habits may be acquired by those not having them already. Study for four years without the habit of manual labor creates a disinclination for such work, and tends to separate brain work and hand work, giving discredit to the latter.

The instruction in the academic and scientific departments is of the highest importance, and nothing can take precedence over it. The industrial feature comes next, and with it is joined the pecuniary assistance which a student can obtain by his work. It differs from that of the old manual labor school in this: there the important matter was to work enough to pay all expenses, the education being a secondary consideration compared with earning enough money to pay one's way. The boy who labors most of his time is physically too tired to accomplish much in his studies, whereas, moderate labor facilitates study. It is desirable that this feature should be understood in connection with the college. It must not be thought that a boy can work his way through by his labor, and also get a first-class education. It is impossible to do both. He could not accomplish both if he had a school at his very door. A student here also has many advantages; he not only gets his tuition free, but also has an opportunity to work and pay for part of his board by his own labor. At home he would have to incur the expense of board and clothing—an expense unavoidable in attending school under any conditions.

EXTRACTS FROM THE LAW IN THE CODE.

Tuition Free and Not Free.—"Tuition shall be free in all branches to students of this state for five years."

Dormitory Privileges.—"The privilege of rooming in the dormitory belongs to the free students, and the due quota of boys from each county in preference to all others."

Apportionment of Students.—"The right belongs to each county to have a number of students admitted proportionate to its number of white educable males compared with the whole number in the state."

The Same, How Made.—"The apportionment shall be made and announced by the president of the college annually, and communicated to the superintendents of education of the counties."

The Same, Duty of Superintendent.—"The superintendent of each county after due notice published, with the consent of the board of supervisors shall give certificates of selection to the number of students to which the county is entitled, and this, in addition to those already in the college, if any. And this selection of new students shall be made by drawing."

The Same, How Certificates Attested, etc.—"The certificate of selection shall be attested by the clerk of the board of supervisors under its seal, and shall entitle the holder to admission into the college, with all its privileges to pursue all its industrial branches selected, and to enter the sub-class or class for which he is fitted."

APPORTIONMENT OF STUDENTS.

The following apportionment of students to the different counties is announced for the session 1914 and 1915:

| County. | No. Entitled. | County. | No. Entitled. |
|----------------------|---------------|-------------------|---------------|
| Adams..... | 8 | Lincoln..... | 32 |
| Alcorn..... | 22 | Lowndes..... | 12 |
| Amite..... | 17 | Madison..... | 8 |
| Attala..... | 22 | Marion..... | 12 |
| Benton..... | 8 | Marshall..... | 12 |
| Bolivar..... | 5 | Monroe..... | 24 |
| Calhoun..... | 22 | Montgomery..... | 27 |
| Carroll..... | 15 | Neshoba..... | 21 |
| Chickasaw..... | 13 | Newton..... | 21 |
| Choctaw..... | 15 | Noxubee..... | 6 |
| Claiborne..... | 6 | Oktibbeha..... | 9 |
| Clarke..... | 18 | Panola..... | 15 |
| Clay..... | 8 | Pearl River..... | 14 |
| Coahoma..... | 5 | Perry..... | 6 |
| Copiah..... | 24 | Pike..... | 14 |
| Covington..... | 19 | Pontotoc..... | 22 |
| DeSoto..... | 15 | Prentiss..... | 21 |
| Forrest..... | 19 | Quitman..... | 3 |
| Franklin..... | 13 | Rankin..... | 13 |
| Greene..... | 10 | Scott..... | 14 |
| Grenada..... | 6 | Sharkey..... | 3 |
| Hancock..... | 9 | Simpson..... | 17 |
| Harrison..... | 42 | Smith..... | 20 |
| Hinds..... | 22 | Sunflower..... | 9 |
| Holmes..... | 11 | Tallahatchie..... | 12 |
| Issaquena..... | 3 | Tate..... | 13 |
| Itawamba..... | 19 | Tippah..... | 17 |
| Jackson..... | 19 | Tishomingo..... | 18 |
| Jasper..... | 14 | Tunica..... | 4 |
| Jefferson..... | 6 | Union..... | 25 |
| Jefferson Davis..... | 9 | Walthall..... | 10 |
| Jones..... | 32 | Washington..... | 8 |
| Kemper..... | 13 | Warren..... | 16 |
| Lafayette..... | 19 | Wayne..... | 25 |
| Lamar..... | 12 | Webster..... | 16 |
| Lauderdale..... | 41 | Wilkinson..... | 6 |
| Lawrence..... | 10 | Winston..... | 26 |
| Leake..... | 18 | Yalobusha..... | 14 |
| Lee..... | 28 | Yazoo..... | 14 |
| Leflore..... | 4 | | |

Should more than the number apportioned to a county desire to attend the college, they should send in their applications, through their county superintendents, to the president of the college. As all counties do not send their full quota, there is always room for some students who make applications in the manner above described. The Code of 1906, extracts from which have been given, virtually devolves upon the county superintendents the responsibility of having their counties represented at the college. The president and the secretary of the college will at all times cheerfully co-operate with them in securing the quota of students from their counties, and to this end will supply all necessary catalogues and circulars, and will, by correspondence, give full information desired.

CONDITIONS OF ADMISSION.

Applicants must be in good health and not less than sixteen (16) years of age. Should, however, two brothers, one above, and the other a little under, the specified age, apply, exception will be made in the case of the latter, if he is well qualified in other respects. Those who have been students at other colleges must bring with them testimonials of honorable discharge.

All students on entering college, are required to sign the following pledge:

"Being now about to enter as a cadet of THE AGRICULTURAL COLLEGE, I do hereby acknowledge my obligation to obey all its laws and regulations. And I pledge myself, ON HONOR, that so long as I am a cadet at the college during term time, or while I remain at college during the vacation, I will not have in my possession any deadly weapon, except such arms as are furnished by the military department, without the consent of the president or faculty. And I do further pledge myself, on honor, that I will not join or form any connection with, either directly or indirectly, any secret club, society, fraternity, or other organ-

ization, composed in whole or in part, of cadets of the college, or attend the meetings of, or wear the badge of any such organization. And I do further pledge myself, ON HONOR, that I will not treat with disrespect by shouting or otherwise, any applicant for admission to the college, and will not engage in 'hazing' or any other maltreatment of a cadet, after admission to the college. And I do further pledge myself, ON HONOR, that I will not smoke cigarettes while I am at college."

Unless a young man is willing to take the above pledge in good faith, he is advised to remain away; for no such young man will be tolerated in the college.

ENTRANCE REQUIREMENTS.

The requirements for admission to the freshman class of the Mississippi Agricultural and Mechanical College for the session of 1913-1914 are eight entrance units. An entrance unit is the credit a student receives for pursuing a subject five days in the week for at least thirty-five weeks in a high school or preparatory school. In computing entrance units it should be noted that the laboratory period must be twice the length of the recitation period. Three units are required, one in English (Rhetoric and Composition), one in Mathematics (Algebra), and one in History (Greek and Roman). Five additional units must be elected from the following groups and subjects:

GROUP I: *English*—Composition, Rhetoric, Literature.

GROUP II: *History*—Greek and Roman, General, English.

GROUP III: *Mathematics*—Algebra, Plane Geometry, Trigonometry.

GROUP IV: *Foreign Languages*—German, Greek, French, Latin, Spanish.

GROUP V: *Sciences*—Agriculture, Botany, Chemistry, Physiology, Physics, Physical Geography, Zoology.

For the session of 1914-1915, students entering the freshman class may be conditioned on three of the five elective units.

ADMISSION.

There are three methods of admission to the Freshman class of the college: First, by examination; second, by certificates; and, third, by diploma.

1. By Examination.

An examination is held at the beginning of each session for candidates desiring admission to the Freshman class. The candidate is examined in Algebra, English, Composition and Rhetoric, Greek and Roman History, Physiology, and Physical Geography. These examinations are given during the first three days after the opening of the session, and are held at the college.

2. By Diploma.

Any student who presents a diploma from an accredited school named in the list below will be admitted to the Freshman class. The following is a list of high schools, preparatory schools and academies that have submitted their courses of study and have been accepted: Aberdeen, Ackerman, Amory, Batesville, Bay Springs, Betheden, Biloxi, Blue Mountain (H. H. A.), Booneville, Brandon, Brookhaven, Brooksville, Buena Vista (A. H. S.), Byhalia, Camden (A. H. S.), Canton, Carrollton, Centerville, Chamberlain-Hunt Academy, Charleston, Clarksdale, Cleveland, Coffeeville, Collins, Columbus, Columbia, Como, Corinth, Crystal Springs, Daleville, Durant, Derma (A. H. S.), Edwards, Ellisville, Enterprise, Eupora, Fayette, Florence, Forest, French Camp, Gloster, Goodman (A. H. S.), Greenville, Greenwood, Grenada, Gulfport, Hattiesburg, Hazlehurst, Hernando, Hickory, Holly Springs, Houston, Indianola, Itta Bena, Iuka, Jackson, Kilmichael (A. H. S.), Kosciusko, Kossuth (A. H. S.), Lake, Laurel, Lexington, Lucedale, Lumberton, Maben, Mathiston, McComb, McHenry, Macon, Magnolia, Meridian, Montrose, Moorhead (A. H. S.) Moss Point, Mound City, Mt. Olive, Natchez, Nettleton, New Albany, Newton, Oakland (A. H. S.), Ocean Springs, Okolona, Oxford,

Pass Christian, Pascagoula, Pelahatchie, Philadelphia, Picayune, Pontotoc, Poplarville (A. H. S.), Port Gibson, Purvis, Quitman, Rolling Fork, Rosedale, Sardis, Scooba (A. H. S.), Senatobia, Shubuta, Shuqualak, Starkville, Summit, Toccoola, Tupelo, Tylertown, Union, Union Church (A. H. S.), Vaiden, Verona, Vicksburg, Walthal, Washington, Water Valley, Wesson, West Point, Wiggins, Winona, Woodville, and Yazoo City; Pine Bluff, Hot Springs, Arkansas; and C. H. S., Memphis, Tennessee; and Weatherford, Texas. There are other schools in the state which prepare students for the freshman class but they have not yet submitted their courses of study to the Examination Committee. Such schools are requested to do so at once in order that they may be added to the list of accredited schools.

3. By Certificate.

Any student may meet the conditions for admission by having a certificate sent from the principal of the school which he has been attending direct to the president of the college. This certificate should give the subjects, the length of time taken, and the grade received unless the regular form of certificate is used. School principals are urged to use the form of certificate given on next page. These forms will be sent on application to the president of the college. All students desiring to make application for advanced standing must have their grades sent direct from the principal to the president of the college and they are urged to use the regular form. As this method of admission is by far the most satisfactory one all students are urged to use it and have these certificates sent to the president at least one month before the opening of college.

The following is the form of blank that principals and superintendents are requested to use in indicating the entrance credits to which their students are entitled. Copies of these blanks may be obtained on application to the president.

APPLICATION FOR ADMISSION INTO THE AGRICULTURAL AND MECHANICAL COLLEGE OF MISSISSIPPI.

I hereby certify that.....
has completed satisfactorily the following courses of study
in..... school, and that
he is entitled to the credits indicated in the column of
entrance units given below:

| Courses. | Entrance Units. |
|--------------------------------------|-----------------|
| 1. ENGLISH—(a) Composition..... | |
| (b) Rhetoric..... | |
| (c) Literature..... | |
| 2. MATHEMATICS—(a) Algebra..... | |
| (b) Geometry..... | |
| (c) Trigonometry..... | |
| 3. HISTORY—(a) Greek and Roman..... | |
| (b) English..... | |
| (c) Mediaeval..... | |
| (d) Modern..... | |
| 4. MODERN LANGUAGE—(a) French..... | |
| (b) German..... | |
| (c) Spanish..... | |
| 5. ANCIENT LANGUAGE—(a) Latin..... | |
| (b) Greek..... | |
| 6. SCIENCE—(a) Agriculture..... | |
| (b) Botany..... | |
| (c) Chemistry..... | |
| (d) Physics..... | |
| (c) Physical Geography..... | |
| (f) Physiology..... | |
| (g) Zoology..... | |
| 7. PRACTICE—(a) Manual Training..... | |
| (b) Drawing..... | |
| 8. | |

.....Principal.

Date.....

An entrance unit is the credit given for a study pursued in a high school or preparatory school for at least thirty-five weeks with five recitations per week of not less than forty minutes each.

DIRECTIONS FOR STUDENTS.

On Arrival at the College.

On arrival at the college, the student should report at once to the office of the college registrar in the administration building, room 105, fill in the registration blanks that will be provided, carry same to secretary's office, make the required deposit and receive his matriculation card. He should then go to the office of the commandant, present his matriculation card and receive his room assignment. He should then go to the secretary of the committee on examinations, present his *matriculation* card and receive his *entrance* card or directions in regard to satisfying the entrance requirements. When he has satisfied the requirements for entrance and has received his *entrance* card, he should present it to the director of the school in which he has chosen his course. The director will then register him, assign him to his class or section and tell him what books will be required.

During the week of the opening of college, members of the college Y. M. C. A. meet all incoming trains for the purpose of giving assistance and directions to new students. The Association also maintains a bureau of information in room 100, on the first floor of the Administration Building.

If a student should arrive at the college on a night train too late to enter regularly, he should report immediately to the office of the commandant, room 100, and receive temporary room assignment.

The offices of the president, vice-president, secretary, registrar, and commandant, are all on the first floor of the Administration Building.

EXPENSES.

When they enter, before they are assigned to a room in the dormitory or admitted into classes, students are

required to make a deposit with the secretary of the college for the items specified below:

| | |
|---|---------|
| Matriculation, library, and lyceum fee..... | \$ 5.00 |
| Hospital fee..... | 5.00 |
| Gymnasium fee..... | 2.00 |
| For rent on furniture..... | 5.00 |
| For uniform..... | 17.00 |
| Advance board for first month..... | 11.00 |
| <hr/> | |
| Total..... | \$45.00 |

The first four items named are for the entire session.

In addition to the above, students who are not residents of Mississippi are required to pay annual tuition fee according to the class they enter as follows: For those entering below the sophomore class, \$30.00; for those entering the sophomore or junior classes, \$40.00; for those entering the senior class, \$50.00.

Mississippi students are entitled to five years free tuition but if they remain in college a longer period they are required to pay a tuition fee of \$30.00 per session for each additional session.

Day students (those who do not room in the dormitories) will be charged a fee of three dollars each for heat in class rooms for the session.

No part of the fees will be refunded to students who leave college after entering and being classified.

Day students are required to deposit \$5.00 which is held to their credit during the time they remain in college and is returned when they withdraw, provided no charge for breakage or damage is made against them.

Matriculation Fee.—The matriculation fee of \$5.00 is divided into a library fee of \$2.50, a lyceum fee of \$1.25, and a campus fee of \$1.25. The library fee is used for buying books, periodicals and papers for the general library of the college to which the students have free access. The

lyceum fee is to provide lectures, musical numbers and other high class entertainments. From eight to twelve of these are furnished each session, no admission being charged students. The campus fee is expended in keeping the buildings and grounds in a thoroughly sanitary condition for the protection of the health of students.

Hospital Fee.—The college hospital is maintained solely for the use of the students and the hospital fee is used for the purchasing of medicines, equipment and supplies and for paying for the hospital service.

Gymnasium Fee.—The gymnasium fee is to provide physical training for all students. Gymnastics is a part of the regular course, two periods per week being required of all freshmen and field sports provided for the upper classmen. The fee is used in providing equipment for these activities.

Furniture Rent.—The college now furnishes each room in the dormitories with all necessary furniture and students are charged a rental fee of \$5.00 per session. This effects a considerable saving, provides equal accommodation for all and makes it possible to maintain better sanitary conditions. All beds are single beds and each student should bring with him such articles as blankets, sheets, pillow cases, and towels.

Uniform.—The complete regulation uniform consists of blouse, trousers, cap, two gray flannel shirts and one black tie, and costs about \$17.00.

All students are required, by a resolution of the board of trustees, to wear the prescribed uniform within five miles of the college buildings.

It is strongly advised that each student have one pair trousers and one blouse in addition to the complete uniform required at entrance. These two items will cost \$11.75 and will enable the student to make a neat appear-

ance at all times. It is not advisable for students to wear citizens clothes while at school and permits to do so will be limited to cases of absolute necessity.

Board.—All students rooming in the dormitories and taking meals in the mess hall are required to have a deposit with the secretary, *at the beginning* of each board month, of not less than eleven (\$11.00) dollars to cover board in advance for the following month.

A board month consists of 28 days with the exception of the month in which is included the Christmas holidays and this month is 35 days in length; but as students who are away from college during the holidays are allowed credit for ten days board, they actually pay for only 25 days this month.

Board is charged at actual cost, to which is added laundry, lights, water and heat. Laundry is \$1.25 per month; lights and water, 50 cents, and the charge for heat varies according to what is used, running from \$1.00 to \$1.50 during the winter months. The past session the total cost per month was an average of \$10.74.

The date of beginning of the different board months for the session of 1914-1915 are shown below and the monthly settlement with the secretary of the college should be made on these dates:

October 15th.
November 12th.
December 10th.
Janunry 14th.
February 11th.
March 11th.
April 8th.
May 6th.

Students must see for themselves that the necessary deposit is made and not depend on the college authorities notifying parents or guardians.

Four days are allowed students at the beginning of each board month in which to make settlement with the secretary. After the expiration of the four days those who have not made the required deposit must pay the day rate.

There must be a settlement at the end of each scholastic month; students who can not pay must leave the college. No student will be given an honorable discharge unless all dues are paid.

Students absent from the college on permit for six or more days may receive credit on board for such absence by complying with the regulations governing leaves of absence, but in no case is credit given for a shorter period than six consecutive days in one board month.

Duties will be suspended for the Christmas holidays, and a credit will be given on board to all students who are away during the entire period of the Christmas holidays, who, on their return, comply with regulations governing leave of absence, but no additional credit will be given to those who leave before duties are suspended, or to those who may be late in returning, as there can be practically no reduction of expenses in running the mess hall except during the authorized holiday period.

Personal Checks.

The college will positively not advance cash, or allow credit on private checks or drafts, and will handle them only for collection. All obligations to the college should be paid in cash, bank exchange, certified checks, cashier's checks, post office or express money orders.

By order of the board of trustees, students are not permitted to draw money deposited with the secretary except in final settlement. Therefore, parents and guardians should supply spending money direct to their sons and wards and

not deposit it with the secretary, expecting it to be drawn out in violation of a specific order.

Students should be provided with about \$55.00 when they reach the college, of which only \$45.00 should be deposited with the secretary. The remainder will be needed to purchase books, stationery, etc. Text-books and drawing material will probably not exceed \$7.00 per term for students of the freshman class, and \$4.00 per term for those of the industrial training department.

The total expense for the average student, including fees, uniform, board, laundry, heat, lights, water, books, stationery, etc., should not exceed \$150.00 for the session.

The students who wish to assist in paying these expenses work on the farm, in the garden, in the dairy, and in other departments where employment can be obtained, from two to three hours a day, three to five days a week, and on Saturdays. They receive ten cents an hour for labor faithfully performed. With ordinary weather, they may earn from \$25.00 to \$50.00 a year. Money so earned is credited on account for board, and it is not to be drawn even when the deposit is more than eleven dollars. Quite a number of students, by their labor, have paid one-third of their total expenses for the session.

We recommend, however, that where a student's financial condition will permit it, that he devote all of his time to his studies and laboratory duties rather than to try to earn money while in school.

The board of trustees desire that parents and guardians co-operate with the college authorities in encouraging the practice of economy, and it is suggested that students should not be supplied with much spending money in excess of what is required for necessary expenses. A large number of the best young men attending the institution spend very little each month above actual expenses, and parents need not fear that their boys will be embarrassed by reducing expenses to a minimum.

Some students register as being 21 years of age when they are much younger, and in the absence of other information this statement is necessarily accepted. They do this for the purpose of getting permits to go on excursion trips, visiting near-by towns, and drawing money from the secretary's office, without having to secure authority from parents or guardian, this authority being required of all students under age before leave of absence is granted. Parents and guardians are requested to write the secretary stating the age of the student and this will assist the college authorities in maintaining discipline and will also prevent the useless expenditure of money that, in some cases, can not well be afforded or easily provided.

An itemized statement of the account of any student will be sent to his parent or guardian, provided the secretary is requested by the parent or guardian to do so; otherwise, statements will not be sent, owing to the great amount of work involved in making them.

AGRICULTURAL COLLEGE (*not* Starkville) is our postoffice and our express office. Both postoffice and express money orders can be bought or collected at "Agricultural College," without the necessity of going to Starkville—over a mile away. Much delay is often caused by letters being addressed to "Starkville" instead of to "Agricultural College." There is also a Western Union telegraph office on the campus and telegrams should be addressed to "Agricultural College," and not to "Starkville."

Students who travel on the Mobile and Ohio, or the Southern Railway in Mississippi (line from Columbus to Greenville), can get an order enabling them to secure a ticket at two cents a mile, provided they make application to the secretary of the college in time, and furnish in each case the following information: (1) Name of applicant; (2) Point at which train will be taken on either of the above roads; (3) Name of railroad. No other road in the state grants reduced rates.

DISCIPLINE.

The president, by college regulation, is responsible for the government and management of the college and supervises and controls all the departments, collegiate and otherwise.

The commandant has immediate command of the corps of cadets and is responsible for the military organization. On his recommendations the president appoints the officers and non-commissioned officers of the regiment. All permits for privileges and all excuses and explanations for delinquencies must be submitted through him. It is his duty to report to the president for his action, all violation of college regulations. He assists the president and faculty in their efforts to enforce discipline, and sees that the punishments given by them are served.

To enforce discipline and preserve orderly conduct, reports are made by the cadet officers and non-commissioned officers and demerits and punishments are given by the president, or the commandant under the president's direction, for those reports which are not removed on explanation submitted to the commandant. Students have the right of appeal in writing, through the commandant, to the president, when they think injustice has been done them.

The scale of demerits is from 1 to 10, according to the degree of the offense.

The grades of punishment are:

I. Reprimand, demerits, privation of privileges, walking extras, and performing extra drills.

II. Arrest, confinement to room or college limits, and reduction to ranks, of cadet officers and cadet non-commissioned officers.

III. Suspension, dismissal with privilege of resigning, and public dismissal.

IV. Expulsion.

Only the president and faculty, and the commandant and the registrar, acting under the direction of the president, can award punishment. Those of the first and second grades are given by the president, and those of the third and fourth grades by the faculty.

The discipline has for its chief aim and object to secure with as little severity as possible, prompt and cheerful obedience to, and respectful, quiet demeanor towards the college authorities, orderly conduct in the section rooms, dormitory, mess-hall, chapel, and in the fields and the shops.

The military feature is a most effective means of enforcing and securing discipline. The company, battalion and regimental organization gives to the cadet officers and cadet non-commissioned officers acquaintance with the proper exercise of authority, and cadets acquire habits of obedience.

This feature is made to conduce to the furtherance of the principal aim and object of the college—its industrial feature.

In order to maintain discipline, do justice to all, clearly discriminate between the faithful and the unfaithful, and render a correct report of conduct, class standing, etc., at the end of each term, the attention of the patrons of the college is respectfully directed to the following regulations governing absences, and their co-operation is earnestly requested:

I. After regularly matriculating, no student, except on recommendation of the surgeon, will be permitted to go home, or elsewhere, except at such time as the faculty may designate. This privilege may be granted upon explicit request of the parent or guardian, for reasons approved by the president.

II. All applications for leave to go home, or elsewhere, must be for a specified time.

III. Any student who is on leave of absence and cannot return at the expiration of the time granted, must notify the president, give reasons therefor, and ask for extension of leave, designating the date on which he hopes to be able to return.

GRADING AND EXAMINATIONS.

The following regulations are taken from the regulations of the faculty (revised edition, May 21, 1906). They were adopted originally and put in force during the session of 1904-1905, and revised in 1913:

1. All legislation on the subject of grading is hereby repealed.
2. Numerical grades are given for daily recitations and for examinations. Grades from 90 to 100 indicate excellent work; from 80 to 90, good work; from 70 to 80, fair work; from 60 to 70, poor work; below 60, failure.
3. The grade for entrance into the freshman class shall not be less than 60.
4. Any student making a term grade below 60 in a subject, shall be debarred from the final examination on that subject, unless the instructor, with the approval of the head of the department, shall see fit to waive this requirement.
5. A student who is qualified for examination in a subject, and has made an examination grade below 60 in it, shall be entitled to a second examination, to be given not later than the end of the first term immediately following the term in which the student failed; or, in case the student does not re-enter college at the beginning of the next term, he shall be required to take this second examination not later than the end of the first half term after he does re-enter college. In case the student fails on this second examination, or neglects to take it during the time indicated, he shall be required to take the subject over in class or under an instructor approved by the president of the college, and the head of the department in which the subject lies. This special examination may be taken on any Saturday afternoon by agreement of professor and student.
6. A student who has qualified for an examination and for reason satisfactory to the instructor and the head of the depart-

ment has failed to take it, shall be entitled to an examination to be taken under time conditions provided for in section 5, and such students shall be entitled to a second examination.

7. Any student who has not taken the final examination in a subject because of the provisions of section 4, may, at the discretion of the instructor, with the consent of the head of the department, take this examination at the time and under conditions provided for in section 5.

8. In all examinations for advanced standing in a subject, or for the passing off of a subject in which he has no term grades, the student shall be required to make a grade of 60; and at the discretion of the instructor, with the consent of the head of the department, students taking examinations under the conditions outlined in this section and in sections 4, 5 and 6, may be required to make a grade of 70.

9. All special final examinations shall be held at such times as are designated by the committee on examination.

10. In case a student be absent from one or more recitations he may, if the instructor see fit, be required to make up the work he missed.

II. In case a student be absent one-fourth or more of the time, he may be required to stand a special examination for a grade. This examination may be, at the discretion of the instructor, combined with his average daily grade for that term, and this average of the special examination, when the instructor sees fit to disregard the daily grades, shall constitute the grade for the term.

12. In subjects requiring practical work, for which an examination would not be an adequate test and in which the making up of work would be impracticable, the passing or the not passing of a student shall be left to the discretion of the instructor and the head of the department.

13. Partial examinations may be held on a subject, when, in the judgment of the instructor, it is advantageous to do so, and the average of these partial examinations shall constitute the final grade on that subject.

14. On all reports for a student's final standing the word "*Passed*", together with the numerical grade, or the word, "*Failed*", where he has failed, shall be reported. No final examination grades shall be turned into the office, but merely the final standing.

15. Under the head of "Remarks," on each report where a student has failed to receive the grade, the instructor shall indicate the reason why no grade has been given.

16. It shall be the duty of each professor to make written report to the president at the end of each half-term of students not doing satisfactory work in subjects taught in his department.

CAMPUS AND BUILDINGS.

ROBERT C. BRIDGES, Proctor of Buildings and Grounds.

Campus.—The college campus extends over about fifty acres of land; it is situated on a series of gently sloping hills and is shaded by native trees. The greater portion of this area is a lawn of Bermuda sod. The location and surroundings of the institution are conducive to health. The college buildings which are used for instruction are arranged according to predetermined plans about an administration building. The plans provide an arrangement by which buildings for allied purposes are grouped together for convenience and facility and it also makes provision for the future growth of the institution by which these allied features may be expanded to accommodate future growth.

During the year 1913, \$10,000.00 was spent in concrete walks connecting the various college buildings. A concrete walk has been laid to connect the concrete walk built to the college limits by the citizens of the community. A model macadam highway now connects the college and the town, and the roads on the campus are kept dragged so that they are always in excellent condition. A further sum of \$5,000.00 has been expended in storm sewers to carry the surplus rain water from the vicinity of the college buildings,, so that students and visitors may be assured at all times of finding the campus in excellent condition and free from mud and slush.

There are now seventy-three separate buildings on the campus; forty-two of this number are residences for professors and instructors, each having the adjacent build-

ings necessary about a country home. The remainder of the buildings, not especially mentioned, are used as barns and for other general purposes.

Water Works and Sewerage System.—The college water supply is obtained from artesian wells and the water works system is complete, and protected for the health of the college community. A steel tank with a capacity of fifty thousand gallons is erected on a high central point and this with the necessary fire pumps and general water works system, provides satisfactory fire protection.

The sewerage system operates successfully, and every effort is made to make it accomplish its best purposes toward the general health of the residents of the college community.

Electric Lights.—All buildings of the institution, with the exception of a few of the college barns, are supplied with electric lights and power, when the latter is required. The electric light system is served with 110 volt, 60 cycle, alternating current, direct from the station for contiguous buildings, while residences and other of the more distant buildings are served from transformers on the 2300 volt lines. The shops, laboratories, and all near-by motors are supplied with 220 volt direct current, from which lantern circuits also are run to the various buildings. The generating units are so selected and arranged that the electrical service may be most efficient and useful to all departments of the college.

A series Mazda street lighting system is being installed for the illumination of the college grounds, roadways, and walks, which will greatly add to the comfort and safety of all who must be abroad at night, and will aid in the maintenance of general discipline. This work also includes the concealing underground of all wires in the central part of the college grounds, and the removal of all unsightly wooden poles.

All work connected with the distribution of current and the maintenance of the system, with all alterations and additions, is performed by students, in the pay and under the direction of the Electrical Department.

Steam Heating Plant.—The college buildings are heated with steam and by this means are made comfortable at a minimum cost. Perhaps no other system could so well accomplish the purposes required.

Central Power House.—The central power house is located, as its name would imply, near the center of the system which it must supply. In it is located machinery and apparatus for supplying or controlling water works, electric lights and power and steam heat to the general system.

Stephen D. Lee Administration Building.—This building is named to commemorate the first president of the college. As its name implies, it is the administrative center of the institution. The building occupies a commanding position with regard to other buildings, and was completed during the summer of 1910. The offices of the president, the secretary, and the commandant of cadets, are located in this building, and in it are student society halls, an armory, the college chapel, and a complement of well equipped rooms and offices for all non-technical departments of the college.

Dormitories.—The largest buildings on the campus are student dormitories. They are equipped in such a manner as to afford maximum convenience, with toilet and baths: shower baths are provided in the basements. In some of the more recent additions, each room is fitted up with lavatory with hot and cold water, with shower baths and toilet rooms located on each floor.

The general plan of the campus provides the location for dormitory extension, which will allow room for expected growth.

The Mess Hall.—This important feature of the college has provision for seating comfortably about fifteen hundred people. The new sanitary kitchen and bakery with tile floor and wainscoting, vermin-proof walls and tile top tables assures cleanliness in the preparation of the food supply. The cooking and serving equipment is entirely modern. The steward's department is supplied with necessary cold storage and general supply storage in order to allow purchases in economical quantity. Ample cold storage rooms for meats and vegetables in separate rooms are located at the ice plant, with future growth of the college provided for in the years to come.

Chemistry Building.—The new chemical laboratory is a practically fire-proof building of modern type of construction, containing on four floors 3,600 square feet of space. It was especially designed to meet the requirements of the several lines of chemical work undertaken by the College. Various laboratories are provided with much specialized equipment, and the department possesses scientific apparatus and general facilities which enable it to offer students in chemistry excellent opportunities for study and work.

The building provides adequate space for lecture rooms, stock rooms, library, and for laboratories of general, organic, engineering, analytical, and agricultural chemistry. The state chemical laboratories on the third floor are fitted with modern appliances for rapid routine analytical work. Plans have been made also for a museum of agricultural and industrial chemistry and for the equipment of a laboratory of electro-chemistry. Each year the department, as a whole, is being strengthened in a material way by the installation of equipment of a permanent character.

W. B. Montgomery Agricultural Hall.—This building, named to commemorate Col. W. B. Montgomery, local trustee of the college for twenty-five years, is devoted to agricultural purposes, with the exception of a rear wing,

which is occupied by the general library. The facilities of this building are as complete as we can supply.

Engineering Building.—This building contains the apartments of all engineering departments of this institution, except the textile. A great amount of floor space is covered by the building and its wings; it is necessary to provide much ground-floor space in order to accomplish the purposes of those branches of engineering which utilize heavy machinery. Adjacent to this building and under direction of one of its departments is located the ice plant.

The Textile Building.—This building is occupied exclusively by the textile department, and its facilities are not surpassed for the purposes of textile instruction. Its equipment is complete and the best talent of the country aided in the design and apportionment of this building and in the selection of its equipment.

The J. Z. George Infirmary.—This building is conveniently located for its purpose. It is at a proper distance from other college buildings and located for perfect drainage and hygienic conditions. It contains the office of the college surgeon, rooms for the staff of nurses, two general wards for ordinary cases and a number of private rooms for serious cases, which are fortunately few in number.

The building is named in commemoration of Senator George, to whom the institution is much indebted.

The Dairy Building.—A building especially devoted to dairy purposes and equipped with ample facilities for instruction in dairying, and also with facilities for supplying milk and butter for student consumption, is located conveniently for its purposes. In it is handled the milk from the college dairy as well as that of the Co-operative Dairy-men's Association, which is now producing over 500 pounds of butter daily.

The Laundry Building and Grounds.—This building is of brick and operated for the exclusive benefit of the student body, and is well equipped.

Veterinary Infirmary.—This building is devoted to the treatment and care of sick stock with ample space for clinic work and for the manufacture of hog cholera serum. A crematory is in connection with this building, where all refuse is burned.

Athletic Building and Grounds.—The Athletic Association has erected grand stand and bleachers with all conveniences, such as shower baths, individual lockers, and toilet room, at Hardy Field. The new athletic track on the west side of the campus has just been completed and furnishes ample accommodation for all track work and kindred sports.

Poultry Department.—A group of suitable buildings is occupied by the poultry department. Included in this group are a tool room, packing sheds, fowl houses, brooders, and other necessary buildings.

Barns.—Separate and sufficient barns are provided for properly housing the large amount of stock owned by the departments of the institution. The largest barns are under the control of the departments of dairy husbandry, animal husbandry, and the experiment station.

The horticultural department also has ample barn facilities.

Horticultural Green-Houses.—A group of suitable buildings is occupied by the departments of horticulture. Included in this group are tool rooms, packing sheds, cold frames, hot houses, and other necessary buildings.

Bacteriological and Entomological Buildings.—This group of buildings belongs to the experiment station, and consists of an office building, a green house, and a wire screen house, used by the entomologist. The office building

is equipped with a dark room and a small chemical and bacteriological laboratory. On the surrounding plots of ground a hundred cylinders are located for experimental work.

Silos and Feeding Sheds.—The mess hall cattle department has concrete silo and feeding sheds and pens for fattening beef cattle which provides ample facilities for furnishing the highest qualities of beef.

EQUIPMENT.

Farm Machinery Laboratory.—A new two-story building 40 x 100 has been erected for this laboratory. Here will be found a large number of different farm machines and various makes of the same machine; also facilities for comparing and testing the machines in laboratory and field.

HEALTH AND SANITATION.

The college is situated in one of the most healthful sections of the state. The campus is 422 feet above sea level. In addition to its natural location and excellent drainage it has a complete system of sewerage, and a magnificent water supply furnished by two artesian wells over a thousand feet deep.

The facilities for caring for the sick are of the very best. The infirmary is splendidly equipped. The college surgeon devotes his entire time to the students, and trained nurses are on duty day and night. As a consequence of these advantages there is comparatively little serious illness among the students.

RELIGIOUS EXERCISES.

There is a daily prayer and song service in the chapel—faculty and students being required to be present. On Sunday morning students may attend any church in the town of Starkville.

Every Sunday morning religious services are held in the chapel, at which all students must be present. These services are conducted in turn by the pastors of the different churches in the town of Starkville and vicinity.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

Apart from the general religious exercises, including the morning chapel service and the Sunday morning sermon, the young men's Christian Association conducts regular meetings. The purpose of the Association is to promote a healthful growth of morals and social life in the college, to develop Christian students through active work, and to lead other students to know and to love Jesus Christ. The public devotional exercises of the Association include a short prayer service on Wednesday evening. On Sunday evening the Y. M. C. A. holds its regular meeting, at which special themes relating to the devotional and moral life of the students are presented, also a series of life-work addresses are given before the student body. Speakers outside of the student body usually present these topics.

The Young Men's Christian Association makes a special effort to provide for all the students, who care to do the work, a practical and devotional study of the Bible. During the session of 1913-1914 this course of study has been directed by student leaders trained in normal groups, led by strong men. In addition to the course in the Bible, the Association presents a study of world problems, including special attention to the modern foreign missionary enterprise. For the coming year, the management of this department is entrusted to a committee of personally interested workers.

The importance of the Association in college life has grown to the point that there has been employed for the past seven years, a general secretary. Prof. H. W. Nelson, who

is general secretary, has, this session, done very effective work in holding the local Association together, having devoted most of his time to the work.

An attractive college calendar and hand-book are issued by the Association annually. In the hand-book are presented the various phases of college life, with necessary information for the students. This book will be gladly sent to prospective students, on application to the secretary.

The new \$60,000.00 Y. M. C. A. building is now under construction and will be completed by the opening of college next session. It will be one of the finest buildings of its kind in the South. It will afford suitable quarters for the Association, and will not only enhance the beauty of the college campus but will open up a larger sphere of usefulness to the Association.

OFFICERS AND COMMITTEEMEN.

| | |
|-----------------------|---------------------|
| F. J. HURST..... | President |
| E. L. HOBBY..... | Vice-President |
| T. G. HUBBARD..... | Recording Secretary |
| A. D. SUTTLE..... | Treasurer |
| H. W. NELSON..... | General Secretary |
| D. B. AYCOCK..... | Membership |
| R. THOMPSON..... | Bible Study |
| L. C. McWILLIAMS..... | Mission Study |
| H. H. TRELEAVEN..... | Devotional Study |
| C. B. ANDREAS..... | Social |
| J. D. WISE..... | Hand Book |
| | Extension |
| J. C. SCOTT..... | Music |
| E. R. RAINEY..... | Athletics |
| J. N. McALLISTER..... | Publicity |

LITERARY SOCIETIES

The two literary societies, the Philotechnic and Dialectic, furnish a valuable supplement to the academic work of the college. They are supported entirely by students, who take great interest in them, a large number of the students being enrolled as members. Their meetings are held weekly on Friday evening, and are always open to visitors. Their exercises, which consist of debates, declamations, and occasional essays, are well fitted to give students a practical acquaintance with parliamentary usage and tactics of the debate, and that ease and readiness in public speaking, so useful in every walk of life.

Each society has made the beginning of a library for the use of its members, which will be added to from time to time, as their means permit.

The birthday of Robert E. Lee is celebrated by the Dialectic Society as their anniversary, and an appropriate program, followed by a reception, is given.

The Philotechnic Society celebrates the birthday of George Washington in the same manner.

These two days, together with the birthday of Abraham Lincoln, are half-holidays, and in addition to the celebration above mentioned, the faculty also presents a suitable commemorative program at the chapel service.

INTERCOLLEGIATE DEBATES.

In the past few years a growing interest in debating has manifested itself among the students. This training in persuasion and accurate reasoning is one of the most valuable assets that one can possess, and the college has, therefore, encouraged this movement. The style of debate which has been developed is the so-called "head-on" debate. This is far removed from the old-style set declamation, and calls for thorough preparation; quick-wittedness; ability to meet questions, and ask them; and extemporaneous development of points brought up in the course of discussion.

This year the following debates were held:

Triangular Debate.—Between Millsaps, Mississippi College, and A. & M., each college debating both sides of the same question with the other two schools. Our representatives against Millsaps this year were K. L. Cockerham and G. W. Wingo; against Mississippi College, W. A. Arnold and R. D. Jacobs.

University Debate.—Held at Columbus. Our representatives: D. A. McCandless, and E. F. White.

State Normal Debate.—Held at Hattiesburg. Our representatives: C. C. Pittman, and E. C. Alford.

Clark Memorial Debate.—Held at Newton. Our representatives: D. B. Aycock, R. Thompson, and T. G. Hubbard, of the Junior class.

Moorhead Debate.—Held at Moorhead, between the sophomore classes of Millsaps and A. & M. Our representatives: D. B. Merkel, and H. D. Falls.

Of these, we won from Millsaps (triangular); Mississippi College (triangular); State Normal.

We lost to the University, and Clarke College. The Moorhead debate was not decided when this catalog went to press.

Representatives for all of these, except the Moorhead debate, are selected from the Demosthenean Debating Club, an organization of twelve Seniors and six Juniors chosen from those members of the Dialectic and Philotechnic Societies who have shown most interest in debating.

MEDALS AND PRIZES.

Freshman Medal.—The Dialectic and Philotechnic Literary Societies each offer annually a medal for the best declamation by a freshman or sub-freshman, who is a member of the society.

Sophomore Debate.—The same societies offer medals to members from the sophomore class for the best debate.

Magruder Medal.—For many years the late Dr. W. H. Magruder, Head of the Department of English, offered annually a gold medal for the best written argument in the sophomore class. Prof. F. J. Weddell, his successor, and long his associate, continues the award under the same name.

Alumni Medal.—The Alumni Association has for years offered a gold medal to the best debater in the two literary societies. This contest takes place annually at commencement, and is limited to members of the junior class. The rules under which the contest is held are given below.

The T. L. Mellen Medal in Oratory.—Prof. F. D. Mellen offers annually, in memory of his father, a gold medal to the student who excels in oratory. The rules for the contest are given below.

RULES FOR THE ALUMNI DEBATE.

1. The debate for the Alumni Medal shall be restricted to members of the Junior class who shall have joined a literary society before December 1 of their Junior year, and who shall remain members in good standing throughout the year.

2. Contestants shall file their entries with the standing committee on public debates by December first.

3. In case more than two shall enter in either society, the standing committee shall arrange for a preliminary debate for that society, to take place the second week in January, under the rules of the final debate.

4. As soon as the representatives of the societies are known, their names shall be furnished to the English department. They shall report at once to the department of English, which shall assist them to select the question, and shall supervise the writing of the manuscript and the training of the speakers. Any representative whose work at any time shall not be satisfactory to the English department may be required to withdraw from the debate, and his alternate shall be given his place.

5. The manuscripts shall not exceed 1,800 words in length. Any manuscript exceeding this length shall be discarded. Ten days before the preliminary contest, and three weeks before the final contest, each contestant shall furnish the standing committee three typewritten copies, each accompanied by a brief, of his manuscript. The brief shall not be counted in the 1,800 word limit, but shall be considered by the manuscript committee in grading on the point of excellence.

6. The manuscripts shall contain no indication as to the author, but shall be marked for identification by the standing committee.

7. The English department shall secure a manuscript committee of three, who shall judge the manuscripts for originality, thought, and technical excellence; each of these to count a possible 16 2-3 points, making a possible total of 50 points.

8. The standing committee shall secure a committee of three on delivery, who shall judge the speakers as to their enunciation, grace, and persuasiveness; each of these to count a possible 16 2-3 points, making a possible total of 50 points.

9. Each member of these two committees of judges shall report his grades to the standing committee, which shall determine the winner, the medal to go to the debater having the largest total of points.

10. Each judge shall record his opinion as to the side winning the debate on the showing made. The decision shall be given to the side having the larger number of votes. In case of a tie, the votes of the manuscript committee shall be omitted, and the question awarded on the votes of the committee on delivery.

11. The winner of the Alumni Medal shall be the representative of the College the following year in the Intercollegiate Oratorical Contest, and the debater given second place shall be alternate.

12. The president of the Alumni Association shall be invited to preside at the debate and to announce at the proper time the result and deliver the medal given by the Association.

RULES FOR THE T. L. MELLEN MEDAL IN ORATORY.

1. The contest shall be open to all regular Juniors and Seniors who shall file their names with the committee on Public Debates before October 15.

2. The contest shall be held during the second week in December. Three typewritten copies of the manuscript shall be in the hands of the committee by December 1.

3. There shall be a manuscript committee of three, who shall judge the manuscript according to the rules of the Mississippi Inter-collegiate Oratorical Association.

4. There shall be a delivery committee who shall judge the delivery according to the rules of the Mississippi Inter-collegiate Oratorical Association.

5. The manuscripts shall not be over 2,000 words in length.

THE COLLEGE REFLECTOR.

The College Reflector, published by the literary societies, is devoted to educational, literary, and industrial topics. It will endeavor to give an accurate account of the workings of the college in its various departments. Though designed primarily to encourage English composition among the society members, space will be given for the publication of public lectures by members of the faculty, and others, and the orations and essays of students of the college. The price is one dollar in advance per scholastic year. Sample copies are sent free to any address. All communications should be addressed to Business Manager, *College Reflector*, Agricultural College, Mississippi.

LIBRARY.

WHITMAN DAVIS, Librarian.

W. W. FOOTE, Assistant Librarian.

The Library is located on the second floor of Montgomery Hall, which is southwest of the main dormitory. The building is heated by steam and lighted by electricity from the central power plant. The part of the building occupied by the Library is oval-shaped with one main floor used for general reading and reference room and two galleries for the book-stacks. For the convenience of the readers tables are placed between the stacks. The Library is supported by student fees, which are paid at the beginning of the session

There are 23,460 volumes on the shelves, 4,100 volumes of which are uncatalogued public documents. There are 64,464 unbound periodicals, 36,712 duplicates, and several thousand bulletins and pamphlets. As soon as pamphlets are bound, they are placed on the shelves with the books.

The Library is a public depository for government publications and receives copies of everything that is sent out free. The Library is classified according to the Dewey Decimal System, and the books are catalogued in the usual manner. Library of Congress cards are used when obtainable. The open shelf system is maintained because it is believed that contact with books in itself is educative. There are 116 paid subscriptions to periodicals, besides 150 others that are sent gratis by the publishers. The Library is a depository for publications of Carnegie Institution of Washington.

The reference department is being strengthened each year. This department is recognized as being the most important in the Library and no efforts are spared to make it what it should be. In it are to be found the leading encyclopaedias, dictionaries, hand-books, guide-books, indexes, and ordinary books of reference, and bound sets of North American Review, Science, Chautauquan, Educational Review, Education, Engineering News, Engineering Magazine, School Review, American Review of Reviews, Harper's Weekly, Harper's Magazine, Atlantic Monthly, Forum, Popular Science Monthly, Outlook, Arena, Living Age, Nation, Literary Digest, Political Science Quarterly, Library Journal, Public Libraries, English Historical Review, Country Life in America, American Homes and Gardens, Garden Magazine, World's Work, Scientific American, Scientific American Supplement, Pedagogical Seminary, Johns Hopkins University Studies in Political Science, Journal of American History, Southern History, Association Publications, Southern Historical Papers, Confederate Veteran, Gulf States Magazine. Sets of bulletins of the United States Department of Agriculture have been bound and are

available for reference. We receive and use the printed cards for the publications of the Department of Agriculture.

During the past year we have received a number of gifts of books and magazines, which we appreciate very much and acknowledgement of which is hereby made.

The Library is kept open almost every day in the year, being closed only on some of the national holidays and on special holidays decreed by the faculty.

There are about 10,000 volumes in the several departments of the college. These do not belong to the General Library and are not included in this report.

PHYSICAL TRAINING AND ATHLETICS.

The department of physical training has control of all gymnastic and athletic activities. It is the aim of the department to give the students such exercises, games, and sports as will best create and maintain a vigorous physical health. It endeavors to reach a large number of students, and to give to all exercise that will be not only beneficial, but interesting. Mississippi A. & M. is a member of the Southern Intercollegiate Athletic Association, and all inter-collegiate contests are governed by the regulations of this body. Representative teams are maintained in football, baseball, basketball, and track. No student whose class work is unsatisfactory is allowed to play on a college team. In addition to intercollegiate athletics, inter-class games and contests are encouraged, and great interest is taken in inter-class football, baseball, and basketball, in which large numbers can participate. It is the aim of the department to foster a spirit of fair play and true sportsmanship in all athletic contests and to make the mere winning of games a subordinate matter.

All students, before graduation, are required to complete in a satisfactory manner, one year's work in the department of physical training. To obtain credit students must enroll in some regularly organized class, and attend two days of each week.

The gymnasium is located in a well lighted and ventilated room, 80x100 feet, and is well equipped with the necessary gymnastic apparatus. The regular courses with calisthenic drills, setting up exercises, dumb bells, Indian clubs, and general apparatus, offered during the year, are planned especially for the upbuilding of the body, and to improve the general health, and are open to all students.

Students who are physically qualified will be allowed to elect in place of gymnastics, (1) football, (2) baseball, (3) basketball, (4) track and field athletics.

A large athletic field is provided for the use of students and all inter-collegiate and other games and meets are held there. The field is equipped with a large grand-stand, bleachers, dressing rooms and showers, and other necessary features.

SCHOOL OF AGRICULTURE.

FACULTY.

- HON. GEORGE R. HIGHTOWER, B. Sc., President of the College.
J. C. ROBERT, B. Sc., V. M. D., Ph. G., M. D., Director of the
School of Agriculture and Professor of Agronomy.
W. F. HAND, M. Sc., Ph. D.....Professor of Chemistry.
J. S. MOORE, M. Sc.....Professor of Dairy Husbandry.
A. B. MCKAY, M. Sc.....Professor of Horticulture.
R. W. HARNED, B. S. A.....Professor of Zoology.
E. R. LLOYD, M. Sc.....Director of the Experiment Station.
D. SCOATES, B. S.....Professor of Agricultural Engineering.
H. B. BROWN, Ph. D.....Professor of Botany and Forestry.
E. M. RANCK, V. M. D.....Professor of Veterinary Medicine.
A. SMITH.....Professor of Animal Husbandry.
.....Professor of Poultry Husbandry.
T. J. BROOKS.....Professor of Markets and Rural Economics.
C. F. BRISCOE, Ph. D.....Professor of Bacteriology.
HUGH CRITZ, B. Sc., Professor in Charge of Two-Year Course
in Agriculture.
H. J. SMITH, B. Sc.....Associate Professor of Chemistry.
R. N. LOBDELL, M. Sc.....Assistant Professor of Zoology.
J. M. BEAL, A. B., M. Sc.....Assistant Professor of Botany.
J. T. WEST, B. Sc.....Instructor in Agronomy.
C. J. HAYDEN, B. Sc.....Instructor in Horticulture.
B. M. WALKER, M. Sc., Ph. D.....Professor of Mathematics.
J. C. HERBERT, M. Sc.....Professor of History and Civics.
W. N. LOGAN, Ph. D., Professor of Geology and Mining Engi-
neering.
J. V. BOWEN, Ph. B.....Professor of Modern Languages.
W. D. CHADWICK, A. B., A. M.....Physical Director.
R. W. GAY, B. S., C. E., Professor of Civil Engineering and
Drawing.
L. L. PATTERSON, A. B., A. M., M. E.,.....Professor of Physics.
R. C. CARPENTER, B. Sc., Professor of Mechanical Engineering.
F. J. WEDDELL, B. Sc.....Professor of English.
S. W. ANDING, First Lieutenant, U. S. Army, Unassigned, Pro-
fessor of Military Science and Tactics and Commandant
of Students.

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|---|-------------------------------------|
| C. R. STARK, B. Sc..... | Associate Professor of Mathematics. |
| V. M. BRAGG, Associate Professor of Mechanical Arts, and Superintendent of Shops. | |
| M. L. FREEMAN, M. Sc..... | Associate Professor of Drawing. |
| A. W. GARNER, B. Sc., Ph. M., | Associate Professor of History. |
| F. D. MELLEN, A. B., M. Sc., | Associate Professor of English. |
| J. S. WALLACE, B. Sc..... | Assistant Professor of Mathematics. |
| H. D. McMURTRAY, B. Sc..... | Assistant Professor of Physics. |
| E. S. TOWLES, B. A., M. A..... | Instructor in English. |
| A. H. SHANNON, A. B., M. A..... | Instructor in English. |
| S. WRIGHT, B. S..... | Instructor in Mathematics. |
| F. J. GRAY, B. Sc.,..... | Instructor in Chemistry. |
| H. C. STEEL, B. Sc..... | Instructor in Chemistry. |
| A. B. BUTTS, B. Sc..... | Instructor in English. |
| H. O. PATE, A. B..... | Instructor in English. |
| LOUIS ROARK, B. A..... | Instructor in Geology. |

Agriculture is the basis of all true prosperity, and education is the foundation upon which its superstructure must be reared to success. Eighty-eight per cent of the population of Mississippi is engaged in farming, hence agricultural instruction is one of the most important and popular departments of our educational system. The successful farmer produces the maximum quantity and highest quality of agricultural produce per acre at a minimum cost.

A man may become a good farmer by practical experience. This, however, without theoretical instruction, is at best an expensive method of obtaining agricultural information. The School of Agriculture offers its students a general education along industrial lines, thorough instruction in technical agricultural sciences, and, as far as possible, the practical application of these sciences to farm life. Laboratory, greenhouse, and field instruction, supplement class-room work. The technical subjects taught are those bearing upon natural laws which underlie the phenomena of plant and animal life.

The School of Agriculture offers five courses:

1. Four-year course in agriculture, leading to the degree of Bachelor of Science.
2. Two-year course in agriculture for the completion of which a certificate is awarded
3. Correspondence course in agriculture especially adapted to farmers and public school teachers.
4. Farmers' short course in agriculture.
5. Graduate course in agriculture.

FOUR-YEAR COURSE IN AGRICULTURE.

The work outlined in this course is given by the following twelve departments which comprise the School of Agriculture: (1) Agronomy, (2) Animal Husbandry, (3) Agricultural Engineering, (4) Bacteriology, (5) Botany, and Forestry, (6) Chemistry, (7) Dairy Husbandry, (8) Horticulture, (9) Markets and Rural Economics, (10) Poultry, (11) Veterinary Science, (12) Zoology and Entomology.

The same course of study is given all the students in the School of Agriculture until the end of the first term senior year. The entire second and third terms (senior year) are devoted to special work in the different departments of the school. The student at the beginning of the second term (senior year) elects one of the twelve departments of the school for special work. The student under the direction of the head of the department, makes out his schedule for the remaining two terms of his college work. A minimum amount of twenty course hours of work is required per week. The departments teaching those subjects most closely related to the student's elective course are selected for these two terms' work.

TWO-YEAR COURSE IN AGRICULTURE.

This course is designed to give, as far as possible, a working knowledge of the principles of agricultural science

and practice to the young men who wish to become practical farmers and stock-men, and who cannot devote time to the high school branches and to other college training. Only a small per cent of the students who enter college can take a full course; a large per cent leave after one year's work, and not more than two out of ten who enter, graduate. Many of the men who leave college return to the farm, where they spend the rest of their lives. They are the men who most need agricultural training. They have as great need and as clear title to vocational instruction as has any other class of students in our state's system of education.

The agricultural instruction given the two year students includes courses in Agronomy, Animal Husbandry, Dairy Husbandry, Entomology, Agricultural Botany, Farm Machines, Forge Shop, Veterinary Science, Markets and Rural Economics, Farm Chemistry, Gas Engines, Bacteriology, Farm Mathematics and Business Methods. The work thus outlined is of a more elementary nature than that of the four-year course. Students spend the forenoon in the class-room and the afternoon under direct supervision of the professors in the demonstration field plats, experimental fields, green-houses, gardens, laboratories, dairy, and with the different breeds of horses, beef cattle, dairy cattle, poultry, hogs, and other improved live stock. In this manner the fields and barns become laboratories of extensive and most practical investigation and observation.

There are in Mississippi many deserving farmers and young men of more mature years than the average student who should take this course. They find it inexpedient to take the four-year course, but desire to increase their efficiency on the farm. The magnificent facilities of the college for practical instruction along agricultural lines are rarely duplicated.

ADMISSION TO THE TWO-YEAR COURSE IN AGRICULTURE.

Requirements for admission are that the student must be at least eighteen years of age, and have sufficient preparation to pursue the assigned work satisfactorily. Every student is urged to complete the four-year course in agriculture, when possible to do so.

Certificate of Proficiency.—Upon successfully completing the two-year course in agriculture, a certificate of proficiency is granted. The course does not, however, lead to a degree. The object of the course is to give, in the shortest, most direct way possible, definite, specific information that will be of immediate value on the farm. For course of instruction, see "Requirements for Certificate of Proficiency in Two-year Course in Agriculture." Students who enter the four years' course after completing the two years' course, will be granted advanced standing in such agricultural studies as is warranted by the extent and efficiency of work done in the respective departments.

REQUIREMENTS FOR CERTIFICATES OF PROFICIENCY IN TWO-YEAR COURSE IN AGRICULTURE.

FIRST YEAR.

| Subject: | Hours per week. | | |
|---|-----------------|-----|-----|
| | 1 T | 2 T | 3 T |
| Agronomy..... | 3-2 | | 3-2 |
| Business Methods..... | 3-0 | 3-0 | |
| Farm Mathematics..... | 3-0 | 3-0 | |
| Veterinary Medicine..... | 3-2 | | |
| Zoology, 10..... | 3-2 | | |
| Botany and Forestry, 22..... | | 3-2 | |
| Farm Machines..... | | 3-2 | |
| Animal Husbandry..... | | 3-2 | |
| Mechanical Engineering, 28, 29, and 74..... | 0-2 | 0-2 | 0-2 |
| Dairying, 10..... | | | 3-2 |
| Markets..... | | | 3-0 |
| Horticulture, 30..... | | | 3-2 |
| Poultry..... | | | 3-2 |
| Military Science, 3..... | 0-2 | 0-2 | 0-2 |

SECOND YEAR.

| Subject: | Hours per week. | | |
|---------------------------------|-----------------|-----|-----|
| | 1 T | 2 T | 3 T |
| Agronomy..... | 3-2 | | |
| Farm Chemistry, 18..... | 4-4 | | |
| Animal Husbandry..... | 3-2 | | 3-2 |
| Zoology, 16..... | 4-2 | | |
| Fertilizers and Legumes..... | | 3-2 | |
| Dairying, 11..... | | 3-2 | |
| Diseases of Farm Animals..... | | 3-2 | |
| Gas Engines..... | | 3-4 | |
| Markets..... | | 3-0 | |
| Forage Crops..... | | | 3-2 |
| Horticulture, 30..... | | | 3-2 |
| Bacteriology..... | | | 4-4 |
| Mechanical Engineering, 74..... | 0-2 | | |
| Military Science, 3..... | 0-2 | 0-2 | 0-2 |

CORRESPONDENCE COURSE IN AGRICULTURE.

This course is designed to give in a brief but comprehensive manner, a summary of the best thought along agricultural lines. Systematic study at home, under the direction of heads of the college departments, may accomplish much of practical value. We believe there are in Mississippi a great number of men unable to attend college who are anxious for an opportunity to better prepare themselves for work along industrial lines. They have as great a need of state aid as the more fortunate young men who attend this institution. This course represents an effort of the college to be of service to those who, for various reasons, cannot attend this school. Teaching by correspondence offers some disadvantages, but on the other hand, the instruction is individual, and each student must do the work for himself. In the latter manner he solves many difficulties and may receive greater benefit from the work thus done. A number of our departments are offering correspondence courses.

REGISTRATION FOR THE CORRESPONDENCE COURSE IN AGRICULTURE.

This course is offered free of cost to any person in Mississippi interested in the subjects herewith presented, and who will study and complete in a creditable manner the work elected. No one will be allowed to pursue more than two courses at a time. Any one desiring to take this work should write the Director of the School of Agriculture, and designate the courses he wishes to study. If you are undecided as to which of the courses are best suited to your needs, correspond with us concerning the work, before you register. After registering in this School, each student is placed under direction of the head of the department in which the work is taken. Instruction will be given as to the books, pamphlets, bulletins, magazines, or other agricultural literature to be secured, and from time to time, detailed instruction will be given by letter as to systematic study, examinations, and other work for each course elected. Examination questions will be furnished with each course elected and will be a guide as to important practical points to be studied in the text. When the course is completed examination questions will be sent to the student. Examination papers will be carefully graded by the department and returned to the student.

CORRESPONDENCE COURSES OFFERED.

The following Departments are offering Correspondence Courses in Agriculture:

OUTLINE OF COURSES.

AGRONOMY.

50. Soils and Soil Fertility.
51. Farm Manures.
52. Preparation of the Seed Bed.
53. Clovers and Grasses.
54. Grain Crops.
55. Hays and Silage Crops.

CHEMISTRY.

56. **Chemistry of Plant and Animal Life.**—This is an elementary course dealing with the chemistry of important plant and animal products, and relations in general of chemistry to plant and animal growth. Some knowledge of elementary chemistry is prerequisite.
57. **The Chemistry of Soils and Fertilizers.**—An elementary study of the chemical composition of soils, the chemistry of the fertilizer industry, and general discussion of the topics of soil and fertilizer chemistry.

ANIMAL HUSBANDRY.

58. **Breeds and Market Classes of Cattle, Horses, Asses, Mules, Sheep, Goats and Hogs.**
59. **The Principles of Feeding Farm Animals,** the Composition and Feeding Value of Stock Feeds, and the Making of Suitable Rations for Stock from Home Grown Feeds.
60. **The Principles of Successful Breedings and Improvement of Farm Animals.**

DAIRY HUSBANDRY.

61. **The Dairy Cow—**
- (a) The breeds of dairy cattle.
 - (b) Selection of breeds.
 - (c) Starting a herd.
 - (d) Care and management of a herd.
 - (e) Feeding a dairy cow.
62. **Care of Milk and Its Products—**
- (a) The production of clean milk.
 - (b) Handling milk after milking.
 - (c) Methods of creaming.
 - (d) Ripening cream for butter making.
 - (e) Churning and marketing butter.
 - (f) Marketing milk and cream.

AGRICULTURAL ENGINEERING.

63. **Tile Drainage.**—This course embraces the design and installation of tile drains.
64. **Farm Machinery.**—This work includes a study of the various classes of farm machinery, and conditions under which the same should be used.

65. **Gas Engines**—This course includes a study of the construction and operation of gas engines.

ENTOMOLOGY.

66. **Elementary Insect Study**.—Instruction will be given in the collecting, rearing, mounting and identifying of insects found in the vicinity of each student. Assigned reading will be given in bulletins and at least one text-book will be used. Students will be expected to do considerable collecting and to make observations of the habits and life histories of insects.

67. **Economic Entomology**.—

- (a) Truck crop insects.
- (b) Field crop insects.
- (c) Fruit and Orchard insects.
- (d) Live stock insects.
- (e) Household insects.

68. **Bee Culture**.—In order to take this course each student must have at least one hive of bees that can be kept under observation, however, the bees may be obtained after the course has begun. The work will consist largely of assigned readings in text-books and bulletins, making certain observations of bees in the hives, and following the practices of good bee keeping.

HORTICULTURE.

- 69. The Home Garden.
- 70. The Home Orchard.
- 71. Commercial Horticulture, or Truck Gardening.

VETERINARY SCIENCE.

- 72. The Care of Live Stock and Prevention of Disease.
- 73. Common Diseases of Farm Animals.
- 74. Contagious Diseases of Farm Animals.
- 75. The Treatment of Common Surgical Cases in Domestic Animals.
- 76. Vaccines and Antitoxins as Applied to Live Stock.

POULTRY HUSBANDRY.

77. **Poultry Raising**.—This course will include the different breeds of poultry best suited for the production of eggs, broilers and fryers. Breeding, feeding and management of poultry will be studied in detail.

78. Commercial Poultry Husbandry.—This course should follow Number 77. It will include a study of poultry houses best suited to southern conditions, the use of brooders, and incubators, economic poultry feeding, and the killing, dressing and marketing of poultry. Common diseases of fowls will be studied and best methods of their prevention and cure discussed.

FARMERS' SHORT COURSE IN AGRICULTURE.

This course is designed to be of practical value to farmers and their families. It includes a course of lectures by the various departments of the School of Agriculture, which are supplemented by practical demonstration in the laboratories, greenhouses, gardens, demonstration plats, experimental fields, and college farm, and at the beef cattle, horse, hog, and dairy barn. This course is given during the summer months in August and September, when work of the farmers will be least interfered with, and when the entire time of the agricultural teaching force and college equipment can be at the service of the members of this Short Course. This work is of great value to the agricultural high school and public school teachers as well as farmers.

GRADUATE COURSE IN AGRICULTURE.

Courses of study leading to the degree of Master of Science are offered to all who have received the Bachelor's degree in this college, or any other college with equivalent courses, who pursue and complete the work assigned, and comply with the college regulations governing candidates for this degree. For requirements and the lines of work offered, see "Degrees," and the courses given by the several departments of this School.

EQUIPMENT.

The college owns and operates 2,270 acres of land. The different departments of the School of Agriculture are equipped for their work. It is the aim of the School of Agriculture to show, as far as possible, the practical appli-

cation of technical class-room instruction. To this end laboratories, field demonstration plats, green-houses, experimental plats, different breeds of horses, cattle, sheep, and swine, and the gardens and fields are made use of.

The State Experiment Station is doing valuable work for the farmers of the state, with which our students are given every facility for becoming familiar.

ADMISSION.

Students elect work in the School of Agriculture when they enter college at the beginning of the freshman year. They should carefully consider this matter before making a decision, for the course pursued in college should, as far as possible, be in line with one's life work.

EXPENSES.

For expenses in the Agricultural School, see the heading, "Expense," elsewhere in this catalogue.

OPPORTUNITIES FOR GRADUATES.

Never before has progressive agriculture occupied such a prominent position with the reading, thinking public. Many of our graduates are employed, at splendid salaries, by private individuals, state and federal government, railroads, land companies, and like corporations, on account of their technical agricultural training. Many of these are teaching and directing the work of agricultural high schools in this and other states. The course of instruction received here prepares the student for a life of usefulness along agricultural lines.

SCHOOL OF ENGINEERING.

FACULTY.

- HON. GEORGE R. HIGHTOWER, B.Sc. President of the College.
B. M. WALKER, M. Sc., Ph. D., Vice-President, Director and Professor of Mathematics.
W. N. LOGAN, A. M., Ph. D., Professor of Geology and Mining Engineering.
C. E. REID, B. S. in E. E., Professor of Electrical Engineering.
R. W. GAY, B. S., C. E., Professor of Civil Engineering and Drawing.
L. L. PATTERSON, A. B., A. M., M. E., Professor of Physics.
R. C. CARPENTER, B. Sc., Professor of Mechanical Engineering.
C. R. STARK, B. Sc. Associate Professor of Mathematics.
V. W. BRAGG, Associate Professor of Mechanic Arts and Superintendent of Shops.
M. L. FREEMAN, M. Sc. Associate Professor of Drawing.
J. S. WALLACE, B. Sc. Assistant Professor of Mathematics.
H. FOX, B. Sc., Assistant Professor of Mechanical Engineering.
H. D. McMURTRAY, B. Sc. Instructor in Physics.
STANLEY WRIGHT, B. A. Instructor in Mathematics.
E. C. BAKER, B. Sc. Instructor in Forge and Foundry.
CARL LEAKE. Instructor in Wood-Shop.
LOUIS ROARK. Instructor in Geology.
J. E. ROBERTSON, B. C. E., Instructor in Civil Engineering.
W. A. GILES. Instructor in Machine Shop.
C. B. BETHEA, B. Sc., Instructor in Electrical Engineering.
W. B. MONTGOMERY, B. S. Instructor in Wood-Shop.
J. C. HERBERT, M. Sc., Professor of History and Civics.
W. F. HAND, M. Sc., Ph. D. Professor of Chemistry.
F. J. WEDDELL, B. Sc. Professor of English.
S. W. ANDING, First Lieutenant Infantry, U. S. Army, Professor of Military Science and Tactics.
H. J. SMITH, B. Sc. Associate Professor of Chemistry.
A. W. GARNER, B. Sc., Ph. M., Associate Professor of History.
F. D. MELLEN, A. B., M. Sc., Associate Professor of English.
E. S. TOWLES, B. A., M. A. Assistant Professor of English.
A. M. MAXWELL. Instructor in Bookkeeping.
A. H. SHANNON, A. B., M. A., B. D., Instructor in English.
H. O. PATE, A. B. Instructor in English.
A. B. BUTTS, B. Sc. Instructor in English.

The School of Engineering comprises the departments of Mathematics, Mechanical Engineering, Physics, Electrical Engineering, Civil Engineering and Drawing, Geology, and Mining Engineering.

It offers in each of the great divisions of engineering—mechanical, electrical, civil, and mining—a thorough course of instruction in the scientific principles and an introduction in the practice of the profession. The work is mainly technical, requires preparation of a high order, and an exhaustive effort in the courses themselves. Each course requires four years for completion and leads to the degree of Bachelor of Science.

The work of the freshman and sophomore years is common to all students of this School, so that a choice between the different courses need not be made until the beginning of the junior year. The general objects of the several courses are, briefly, as follows:

The course in mechanical engineering is designed to train the student in those technical and scientific subjects in which the engineer must be well grounded and to afford the student an opportunity to specialize in the direction of the mechanical engineering profession. Special stress is laid upon the preparation of the necessary working drawings, the manual training work in the wood shop, the work in the forge, foundry, and machine shops, a familiarity with the operations of power and electric light plants, the construction of power systems, and original research work in the mechanical laboratory.

The course in electrical engineering is designed to train the student in those fundamental principles of mechanics and electricity which form the basis on which the engineer must build, and to afford the student an opportunity for specialization in the electrical engineering profession. These students take the regular practical courses and shop work with the mechanical engineers and have special stress laid on a familiarity with power and light plants, the operation

of direct and alternating current incandescent, arc, and power systems; the principles of alternating currents and machinery. the installation of electric light systems, power use and transmission, and original research work in the electrical laboratory.

The course in civil and mining engineering has for its object to impart as broad a scientific training as the length of the course and the essential studies will allow, and to afford the student an opportunity to specialize along some line in civil and mining engineering. Strict emphasis is laid on work in surveying, geology, and field methods which is so valuable to young engineers; mechanics and its applications to the designs of roofs and bridges and other structures; railway engineering, railway location and construction, masonry construction and foundation, bridge designs, water supply, and sanitary engineering.

In each of these courses a great deal of time is required for the practical work in the field, shops, and laboratories; but every engineer knows and appreciates full well the benefit of this training and experience. It is our aim to train our students to be independent and efficient workers and to adopt the methods of professional engineers. All engineering students are advised to spend their vacations in factories, repair shops, power, and electric light plants, and with engineering corps in the field, in order to obtain commercial experience, that they may better appreciate the relations of their technical training and actual work.

In addition to the technical training, all engineering students receive instruction in English, Chemistry, History, Civics, Political Economy, and Military Science and Tactics.

Special Courses.—Special courses are arranged in the School of Engineering to accommodate persons of mature years who desire to pursue some special line of engineering work without becoming candidates for a degree.

Graduate Courses.—Advanced courses, open to graduates only, are offered by the several departments in the School of Engineering.

EQUIPMENT.

The wood shop, forge shop, foundry, and machine shop are equipped with tools and machines of modern type; the laboratories in the departments of mechanical engineering, electrical engineering, and geology and mining engineering, are being equipped with apparatus and machinery of modern pattern from the best makers; and the instruments in the department of civil engineering comprise transits, levels, compasses, rods, chains, tapes, plane tables, and other minor instruments.

ADMISSION.

The same rules apply in regard to admission to the School of Engineering as apply for admission to the college and are given elsewhere in the catalogue.

EXPENSES.

The expenses of students in the School of Engineering are the regular college expenses and are given under that heading in the catalogue.

ENGINEERING CLUB.

The students in the School of Engineering have organized a club which is known as the Mississippi Association of Student Engineers. The object of the Association is to promote interest in, and increase our knowledge of, the science of engineering.

SCHOOL OF INDUSTRIAL EDUCATION.

FACULTY.

- HON. GEORGE R. HIGHTOWER, B. Sc. President of the College.
B. M. WALKER, M. Sc., Ph. D., Vice-President and Professor of Mathematics.
G. H. BRUNSON, A. B., A. M., Acting Director, and Professor of Philosophy and Sociology.
J. V. BOWEN, B. Sc.....Professor of Modern Languages.
G. G. SNOW, B. Sc., Associate Professor of Industrial Pedagogy.
KIMBLE HARMON, B. S.....Instructor in English.
J. M. KENNA, B. S.....Instructor in Mathematics.
G. GUYTON, B. S.....Instructor in History and Civics.
L. G. PRENTICE, B. S., Instructor in Elementary Science and Agriculture.
Miss ADA JOYCE FOSTER, Teacher in Primary Observation School.
J. C. HERBERT, M. Sc.....Professor of History and Civics.
W. F. HAND, M. Sc., Ph. D.....Professor of Chemistry.
W. N. LOGAN, A. M., Ph. D., Professor of Geology and Mining Engineering.
J. S. MOORE, M. Sc.....Professor of Dairy Husbandry.
B. J. MARSHALL, M. D., Professor of Anatomy and Physiology.
R. W. HARNED, B. S. A.....Professor of Zoology.
W. D. CHADWICK, A. B., A. M., Professor of Physical Education and Director of Athletics.
R. W. GAY, B. S., C. E., Professor of Civil Engineering and Drawing.
DANIELS SCOATES, B. S., Professor of Agricultural Engineering.
L. L. PATTERSON, A. B., A. M., M. E.....Professor of Physics.
H. B. BROWN, Ph. D.....Professor of Botany and Forestry.
S. W. ANDING, First Lieutenant, U. S. A., unassigned, Professor of Military Science and Tactics, and Commandant of Students.
E. M. RANCK, V. M. D.....Professor of Veterinary Science.
J. C. ROBERT, M. D., V. M. D.....Professor of Agronomy.
R. C. CARPENTER, B. Sc., Professor of Mechanical Engineering.
T. J. BROOKS.....Professor of Markets and Rural Economics.
CHARLES FRANCIS BRISCOE, A. M., Ph. D., Professor of Bacteriology.
F. J. WEDDELL, B. Sc.....Associate Professor of English.

C. R. STARK, B. Sc.....Associate Professor of Mathematics.
V. W. BRAGG, Associate Professor of Mechanic Arts, and Superintendent of Shops.
M. L. FREEMAN, M. Sc.....Associate Professor of Drawing.
A. W. GARNER, B. Sc., Ph. M., Associate Professor of History and Civics.
H. J. SMITH, B. Sc.....Associate Professor of Chemistry.
HUGH CRITZ, B. Sc.....Associate Professor of Agronomy.
F. D. MELLEN, A. B., M. Sc., Associate Professor of English.
J. S. WALLACE, B. Sc.....Assistant Professor of Mathematics.
H. D. McMURTRAY, B. Sc.....Assistant Professor of Physics.
STANLEY WRIGHT, B. A.....Instructor in Mathematics.
E. S. TOWLES, B. A., M. A.....Instructor in English.
A. W. SHANNON, A. B., A. M.....Instructor in English.
CARL LEAKE.....Instructor in Manual Training.
J. M. BEAL, B. S.....Assistant Professor in Botany.
LOUIS ROARK, A. B.....Instructor in Geology.
H. O. PATE, A. B.....Instructor in English.
J. E. ROBERTSON, B. C. E.....Instructor in Drawing.
A. B. BUTTS, B. Sc.....Instructor in English.

PURPOSE AND PLAN OF ORGANIZATION.

The purpose of the School of Industrial Education is the training of teachers. Special emphasis is laid upon Pedagogy, Agriculture, and Manual Training. The following courses are offered.

The Four Years' Course.

The Two Years' Training Course.

The Industrial Course (A and B).

The Teachers' Short Spring Course.

These courses are described as follows:

THE FOUR YEARS' COURSE.

The four years' course is adapted to the needs of the average boy who comes to the college with only so much of previous training as will enable him to enter the regular freshman class. Teachers and others who wish to take advantage of the instruction offered here may enter at any time with such advanced standing as their previous

preparation, shown by examination, or certificate from a reputable school, may warrant.

Instruction and training in this course are designed to furnish (a) a liberal culture in Language, History, Science, and Mathematics; (b) with provision for elective work, the student has an opportunity of becoming proficient in some particular chosen branch while at the same time he is laying a broad foundation in general culture; and (c) the broadest possible professional knowledge within the limits set.

The objective toward which this course is planned is preparation for efficient service in vocational and industrial training schools, such as the agricultural high school, vocational training departments in town and city schools, and in consolidated rural schools. The richness of the course in social sciences, it is believed, will furnish admirable preparation for the study of law, and journalism, as well as other forms of community service.

Industrial education students receive instruction in the following departments not directly connected with the School of Industrial Education: English, Mathematics, History, Political Science, Chemistry, Physics, Botany, Geology, Agronomy, Horticulture, Manual Training, Mechanical Engineering, and Drawing. The Department of Modern Languages offers a two years' course in French, Spanish and German, respectively, students being allowed to take their choice of the three. The department of Philosophy and Sociology offers, in addition to Pedagogy, the following courses: Psychology, History of Education, Logic, Ethics, Sociology, and Mississippi School Conditions.

A department of Public Discourse has been established in the School of Industrial Education with a view to training young men for efficiency in public speech and effective writing for the press.

For the arrangement of courses according to year and term, see "Requirements for Bachelor of Science Degree" in Industrial Education, page 80.

Post-graduate courses in the various departments of education will be prepared on application.

The School of Industrial Education offers a few teaching fellowships each year to graduates of merit who wish to make further study and preparation for teaching.

THE TWO YEARS' TRAINING COURSE.

This course was established especially for young men who are preparing themselves to teach in the rural schools. The student who remains at college until he finishes the four years' course in the School of Industrial Education does not go into the rural schools, but naturally and justly teaches where his income is more than it would be there. "The Two Years' Training Course," therefore, in the School of Industrial Education, has been inaugurated in order that worthy young men of merit may obtain industrial, scientific, and literary training which will make them more efficient in rural school work.

In addition to equipping the student for rural school work this course, when completed, prepares him for the freshman class of the college, in case he desires to continue his studies for a longer period.

OUTLINE OF TWO YEARS' TRAINING COURSE.

FIRST YEAR.

| Subject: | Hours per week. | | |
|-------------------------------------|-----------------|-----|-----|
| | 1 T | 2 T | 3 T |
| Agriculture..... | | | 5-0 |
| Arithmetic..... | 5-0 | 5-0 | 5-0 |
| Botany..... | 5-0 | | |
| Geography..... | 5-0 | 5-0 | |
| Grammar and Composition..... | 5-0 | 5-0 | 5-0 |
| Mechanical Engineering, 28, 55..... | 0-4 | 0-4 | 0-4 |
| Primary Algebra..... | | 5-0 | 5-0 |
| Physiology and Hygiene..... | 1-0 | | 5-0 |
| U. S. History..... | 5-0 | 5-0 | |
| Military Science and Tactics..... | 0-2 | 0-2 | 0-2 |

SECOND YEAR.

| | | | |
|--------------------------------------|-----|-----|-----|
| Agriculture..... | 5-0 | 5-0 | |
| Algebra..... | 5-0 | 5-0 | 5-0 |
| Ancient History..... | 5-0 | 5-0 | 5-0 |
| Bookkeeping..... | | | 5-0 |
| Botany..... | | | 5-0 |
| Civil Government..... | | 5-0 | |
| Hygiene..... | 1-0 | | |
| Manual Training and Drawing, 56..... | 0-4 | 0-4 | 0-4 |
| Military Science and Tactics..... | 0-2 | 0-2 | 0-2 |
| Rhetoric and Composition..... | 5-0 | 5-0 | 5-0 |

INDUSTRIAL COURSE.

Division A.

This course is given for young men who, for one reason or another, have been denied the advantages of good school facilities at home. The instruction is both theoretical and practical. One half of each school day is devoted to classroom work, and the other half to some kind of practical work in the shops, at the barn, poultry department, dairy department, horticultural department, textile school, on the farm.

| | Hours per week. | | |
|--|-----------------|------|------|
| Subject: | 1 T | 2 T | 3 T |
| Agriculture..... | 5-0 | 5-0 | |
| Arithmetic..... | 5-0 | 5-0 | 5-0 |
| Farm Accounts..... | | 5-0 | 5-0 |
| Farm Carpentry, or practical work in some Department..... | 0-12 | 0-12 | 0-12 |
| United States History..... | | 5-0 | 5-0 |
| Geography..... | 5-0 | | |
| Grammar..... | 5-0 | 5-0 | 5-0 |
| Selected Readings and General Exercises..... | 5-0 | 5-0 | 5-0 |

Division B.

The work in this course is given for the benefit of boys and young men, who by their labor, expect to pay their own expenses while in school. During the day those taking this course do some kind of practical work for which they are paid. Any worthy boy or young man can enter this

course without any money and by hard work and economy get an education.

| | 1 T | 2 T | 3 T |
|------------------|-----|-----|-----|
| Agriculture..... | 5-0 | 5-0 | 5-0 |
| Arithmetic..... | 5-0 | 5-0 | 5-0 |
| Grammar..... | 5-0 | 5-0 | 5-0 |

TEACHERS' SHORT SPRING COURSE.

The School of Industrial Education offers a short course for teachers during the last term of the college session. This course is prepared primarily with a view toward meeting the needs of teachers interested in industrial and scientific subjects, and is timed to suit the convenience of teachers in the country schools.

Exceptional advantages are offered in pedagogy, in the various phases of agriculture, and in manual training.

Besides the subjects mentioned above, instruction will be given in branches of the public school curriculum, and in other subjects for which there is a demand.

The course opens about the first of April and continues until the close of the session.

Teachers contemplating attending this course should notify Secretary W. J. Jennings not later than March 5.

SUMMER SCHOOL.

No summer school will be held at the college in the summer of 1914 on account of one's being held at the I. I. & C., at Columbus; it was thought to be unwise to hold two so near to each other. It is expected that a summer session will be held in 1915, and regularly thereafter.

Courses will be given, however, for teachers of Agriculture and Domestic Science in the Farmers' Institute to be held at the college from August 17 to September 5. Such teachers are urged to take advantage of the excellent facilities of the college for this kind of work. Fuller announcement will be made in a bulletin later.

SCHOOL OF GENERAL SCIENCE .

FACULTY.

- HON. GEORGE R. HIGHTOWER, B. S. President of the College.
W. N. LOGAN, A. M., Ph. D., Director and Professor of Geology and Mining Engineering.
W. F. HAND, M. Sc., Ph. D., Professor of Chemistry and State Chemist.
R. W. HARNED, B. S. A.....Professor of Zoology.
L. L. PATTERSON, A. M., M. E.....Professor of Physics.
H. B. BROWN, Ph. D.....Professor of Botany.
C. F. BRISCOE, Ph. D.....Professor of Bacteriology.
B. J. MARSHALL, M. D., Professor of Physiology, Anatomy, and College Surgeon.
H. J. SMITH, B. Sc.....Associate Professor of Chemistry.
H. D. McMURTRAY, B. Sc., Assistant Professor of Physics.
R. N. LOBDELL, M. Sc.,.....Assistant Professor of Zoology.
J. M. BEAL, B. S.....Instructor in Botany.
LOUIS ROARK, B. A.....Instructor in Geology.
J. C. HERBERT, M. Sc., Professor of History and Civics, and Registrar.
J. V. BOWEN, Ph. B.....Professor of Modern Languages.
W. D. CHADWICK, A. M., Professor of Physical Education and Director of Athletics.
G. H. BRUNSON, A. M., Acting Director of School of Industrial Education and Professor of Psychology and Sociology.
T. J. BROOKS, Professor of Markets and Rural Economics.
F. J. WEDDELL, B. Sc.....Professor of English.
S. W. ANDING, First Lieutenant, U. S. A., unassigned, Professor of Military Science and Tactics, and Commandant of Students.
C. R. STARK, B. Sc.....Associate Professor of Mathematics.
V. W. BRAGG, Associate Professor of Mechanic Arts, and Superintendent of Shops.
M. L. FREEMAN, M. Sc.....Associate Professor of Drawing.
A. W. GARNER, B. Sc., Ph. M., Associate Professor of History.
F. D. MELLEN, A. B., M. Sc., Associate Professor of English.
J. S. WALLACE, B. Sc.....Assistant Professor of Mathematics.
A. M. MAXWELL.....Instructor in Bookkeeping.
E. S. TOWLES, B. A., M. A.....Assistant Professor in English.

STANLEY WRIGHT, B. A.....Instructor in Mathematics.
 CARL LEAKE, Instructor in Manual Training and Director of
 Music.
 A. B. BUTTS, B. Sc.....Instructor in History.
 E. C. HAYS, B. A.....Instructor in Gymnasium.

OBJECT.

The primary object of the courses of Instruction in the School of General Science is to give instructions in the various lines of science, such as botany, chemistry, geology, physics, entomology, zoology, physiology, and bacteriology. The courses are designed to make specialists in these subjects. They have for their object the preparation of young men for positions as sugar chemists, agricultural chemists, geologists, physicists, entomologists, and bacteriologists. There is a constant demand for young men trained in the sciences to take positions in colleges as teachers or investigators in government work as experts and demonstrators, and in the various industrial lines as specially trained men. The special courses in science make it possible for these demands to be met, they also provide the foundation work for the student who desires to pursue some special line of science in some higher institution. Students who have not yet determined what their life work is to be but who desire to obtain a broad liberal college training will find this course adapted to their needs. Another object of the school is to furnish an introductory course to those young men who desire to become physicians, dentists, or pharmacists, or to specialize in some line or work which requires a liberal science course as a basis. The facilities which are offered make it possible for those who are looking forward to these professions to become well grounded in the fundamental principles underlying their chosen field. The laboratory and classroom facilities are superior to any in the state and are the equal of any in the entire South.

The following is an outline of the courses of study in science. The courses for the freshman and sophomore years

are required; those of the junior and senior years are elective, subject to the restrictions which are given in the following pages:

COURSE OF STUDY.

FRESHMAN CLASS.

| Subjects: | Hours per week. | | |
|------------------------------------|-----------------|-------|-------|
| | 1 T | 2 T | 3 T |
| Mathematics, 2, 4..... | 10-0 | 5-0 | 5-0 |
| English, 2, 3, 4..... | 5-0 | 5-0 | 5-0 |
| History, 1, 7, 6..... | 3-0 | 3-0 | 3-0 |
| Drawing, 40, 45, 46..... | 0-4 | 0-4 | 0-4 |
| Mechanical Engineering (Shop)..... | 0-4 | 0-4 | 0-4 |
| Hygiene..... | 1-0 | | |
| Geology (Physiography) 1..... | | 5-4 | |
| Military Science..... | 0-2 | 0-2 | 0-2 |
| Gymnasium..... | 0-2 | 0-2 | 0-2 |
| Botany..... | | | 5-4 |
| | 18-14 | 17-18 | 17-18 |

SOPHOMORE CLASS.

| Subjects: | Hours per week. | | |
|-------------------------|-----------------|-------|-------|
| | 1 T | 2 T | 3 T |
| Mathematics, 21, 7..... | 5-0 | 5-0 | 5-0 |
| English, 2, 5, 6..... | 5-0 | 5-0 | 5-0 |
| Chemistry, 20, 22..... | | 5-4 | 5-4 |
| Physics, 4..... | 5-3 | 5-3 | |
| Military Science..... | 0-2 | 0-2 | 0-2 |
| Zoology, 10..... | | 3-4 | 4-6 |
| Botany..... | 5-4 | | |
| | 20-10 | 23-13 | 19-11 |

The work for the junior and senior years may be selected by the student subject to the following requirements: students electing the General Science Course will be required to take, during the junior and senior years, a minimum of 150 course hours of which 5 course hours (5 hours per week for one term of theoretical work or its equivalent) in addition to drill shall be in Military Science and Tactics, and 7 course hours (5-4) shall be in geology. The remaining 138 course hours may be elected subject to the following conditions:

1. Not less than 75 course hours or more than 88 must be elected from the following departments: bacteriology, botany, chemistry, geology, physics, physiology, and zoology.

2. Students specializing in any of the above departments shall be required to elect 40 course hours in the department in which his special course is chosen and 20 course hours in the Department of Modern Languages.

3. Students electing a course in General Science will be required to elect 20 course hours in at least two of the above specified departments of science.

4. To complete his course the student must elect not less than 50 course hours and more than 60 course hours from subjects offered in the following department: English, history and civics, modern languages, mathematics, philosophy, sociology, rural economics, and others subject to the requirement that he may elect not less than 10 hours or more than 30 course hours in any one department.

5. All special courses in science must be approved by the director and by the head of the department in which the student elects his major subject.

COURSES FOR JUNIOR AND SENIOR YEARS.

It is possible to select from a large number of courses for the junior and senior years. This freedom is allowed subject to the restrictions already mentioned to enable the student to select only such subjects as will best aid him in the particular line of science or profession which he intends to follow. The outline given below exhibits a possible distribution of electives as between the sciences and other subjects:

| Subjects: | JUNIOR YEAR. | | | SENIOR YEAR. | | |
|---------------------|--------------|-----|-----|--------------|-----|-----|
| | 1 T | 2 T | 3 T | 1 T | 2 T | 3 T |
| Sciences..... | 15 | 15 | 15 | 15 | 15 | 15 |
| Other Subjects..... | 10 | 10 | 10 | 10 | 10 | 10 |
| Total hours..... | 25 | 25 | 25 | 25 | 25 | 25 |

DEGREES.

The degree of Bachelor of Science (B. Sc.) is conferred upon students who spend at least one year in resident study and complete any one of the full courses by passing all the required examinations.

The degree of Master of Science (M. Sc.) will be conferred on any person who has taken the Bachelor's degree in this college or any other college with equivalent courses, who pursues and completes the graduate course prescribed and complies with the following requirements:

1. Candidates for the Master's degree shall matriculate as graduate students.

2. Graduates of other colleges shall spend at least one scholastic year in resident study at this college; in the cases of graduates from this college the foregoing residence requirements shall apply, except in cases where the faculty may permit the candidate, on the recommendation of the head of the department in which his major course lies, to do an equal amount of residence work in some other institution of like rank with this college.

3. The courses leading to the degree of Master of Science shall require for their completion an amount of work at least the equivalent of what can be done in one scholastic year wholly devoted to the work for the degree.

4. The candidate shall complete a major and a minor course of his own selection, to be chosen in those departments which offer courses for the Master's degree. The minor course shall be selected subject to the approval of the head of the department in which the major course is taken, and shall occupy one-third the total time. If the student at any time changes his selection of a major department, the work already done in that department shall not be counted towards the Master's degree, unless approved by the head of the new major department.

5. The candidate shall have a reading knowledge of German, French, Spanish, or Latin, to be certified by the

department of Modern Languages of this college, the choice to be approved by the head of the department in which the major work is taken.

6. The candidate shall submit to the head of the department in which his major work is taken at least three weeks before graduation an acceptable graduation thesis on a subject of investigation or study in the department in which the major course is taken. The thesis shall be submitted to the department of English for its approval at least two weeks before commencement.

7. Application for the degree shall be filed with the secretary of the faculty not later than one month after the beginning of the session.

The only honorary degree conferred is that of Master of Agriculture (M. A.) bestowed upon those who have attained eminent success in some branch of agriculture.

Note 1.—In the following pages are given the requirements for graduation in the various courses. In these “degree requirements” the abbreviations, 1T, 2T, 3T, mean first term, second term, third term. The first number of each pair in each of these columns means the number of hours of theoretical or recitation work required each week, and the second number indicates the number of hours of practical or laboratory work required each week. The numbers following the name of each course refer to the course numbers in the detailed statement or “Departments of Instruction,” which are arranged alphabetically in this catalogue immediately following these tables.

Note 2.—In the second and third terms of the senior year each student in the Agricultural School is required to elect enough work to give him a total of at least twenty course hours—a course hour being one hour of class or theoretical work or two hours of laboratory or practical work each week throughout a term.

REQUIREMENTS

For the Degree of Bachelor of Science in Agriculture.

FRESHMAN CLASS.

| SUBJECT: | HRS. PER WEEK. | |
|---------------------------------|----------------|-------------|
| | 1st T. | 2d T. 3d T. |
| Agronomy, 2 and 16..... | 4-0 | 4-0 4-2 |
| Hygiene..... | 1-0 | |
| Botany and Forestry, 1..... | | 2-4 |
| Drawing, 40, 47..... | 0-4 | 0-2 |
| English, 8..... | 3-0 | 3-0 |
| History and Civics, 1, 14..... | 3-0 | 3-0 |
| Mathematics, 22..... | 3-0 | 3-0 |
| Mechanical Engineering, 28..... | 0-4 | 0-2 |
| Military Science, 3..... | 0-2 | 0-2 |
| Physics, 5 and 6..... | | 3-2 |
| Geology and Mining, 1..... | 3-0 | 3-2 |
| Gymnasium..... | 0-2 | 0-2 |
| Poultry, 1..... | 0-2 | 0-2 |
| Agri. Engineering, 15, 16..... | 0-2 | 0-2 |

JUNIOR CLASS.

| | |
|----------------------------------|-----|
| Agronomy, 9 and 15..... | 0-2 |
| Military Science, 3..... | 3-3 |
| Physiography..... | 4-2 |
| Animal Husbandry, 3..... | 4-5 |
| Chemistry, 2, 3, 4, and 14..... | |
| Dairying, 5..... | 4-4 |
| Zoology, 1, 2..... | 2-4 |
| Horticulture, 26..... | 4-2 |
| Veterinary Medicine, 8..... | 4-2 |
| Agricultural Engineering, 3..... | |
| Rural Economics, 1..... | 2-2 |
| Poultry, 2..... | |

SOPHOMORE CLASS.

| SUBJECT: | HRS. PER WEEK. | |
|-------------------------------------|----------------|-------------|
| | 1st T. | 2d T. 3d T. |
| Bot. and Forestry, 2, 3, and 5..... | 2-4 | 2-4 2-4 |
| English, 10, 11, 14..... | | 3-0 3-0 |
| Mathematics, 24 and 26..... | | 3-0 3-0 |
| Military Science, 1, 2, 3..... | | 0-2 3-2 |
| Animal Husbandry, 1 and 2..... | | 4-4 4-4 |
| Chemistry, 1 and 5..... | | 3-2 4-2 |
| Dairying, 2..... | | 4-4 |
| Zoology, 15..... | | 3-2 |
| Horticulture, 25..... | | 3-2 |

SENIOR CLASS.

| | |
|----------------------------------|---------|
| Botany and Forestry, 7..... | 2-2 |
| History and Civics, 6..... | 3-0 |
| Military Science, 3..... | 0-2 |
| Zoology, 3..... | 2-4 |
| Bacteriology, 1..... | 2-6 |
| Agricultural Engineering, 7..... | 3-5 |
| Elective..... | 20 |
| | 0-2 0-2 |
| | 20 20 |

REQUIREMENTS

For the Degree of Bachelor of Science in Civil and Mining Engineering.

FRESHMAN CLASS.

| SUBJECT: | HRS. PER WEEK. | | |
|------------------------------------|----------------|-------|-------|
| | 1st T. | 2d T. | 3d T. |
| (See note p. 75) | 5-0 | 5-0 | 5-0 |
| Mathematics, 23..... | 5-0 | 5-0 | 5-0 |
| Hygiene..... | 1-0 | | |
| Mathematics, 2..... | 5-0 | | |
| Drawing, 40, 41, 43..... | 0-4 | 0-6 | 0-6 |
| Military Science, 3..... | 0-2 | 0-2 | 0-2 |
| English, 1..... | 5-0 | 5-0 | 5-0 |
| History and Civics, 1, 14, 17..... | 3-0 | 3-0 | 8-0 |
| Geology and Mining Eng., 1..... | | 5-0 | |
| Mechanical Eng., 28, 30, 57..... | 0-4 | 0-6 | 1-6 |
| Gymnasium..... | 0-2 | 0-2 | 0-2 |

JUNIOR CLASS.

| | | | |
|---|-----|-----|-----|
| Civil Engineering, 21, 22, 23, 24, 25, 27, 59..... | 5-9 | 5-9 | 8-9 |
| English, 5, 9, 15..... | 5-0 | 5-0 | 5-0 |
| Geology, 3, 3b, 5..... | 5-2 | 5-2 | 5-0 |
| Mathematics, 9, 10..... | 5-0 | 5-0 | 5-0 |
| Military Science, 3..... | 0-2 | 0-2 | 0-2 |
| Chemistry, 11..... | | | 2-6 |

SOPHOMORE CLASS.

| SUBJECT: | HRS. PER WEEK. | | |
|----------------------------------|----------------|-------|-------|
| | 1st T. | 2d T. | 3d T. |
| Chemistry, 20, 22..... | 5-4 | 5-4 | 5-4 |
| Drawing, 48, 49, 50..... | 0-4 | 0-4 | 0-4 |
| Military Science, 3, 2, 1..... | 0-2 | 0-2 | 3-2 |
| English, 2, 12, 13..... | 5-0 | 5-0 | 5-0 |
| Mechanical Eng., 33, 34, 58..... | 0-4 | 0-4 | 0-8 |
| Mathematics, 25, 27..... | 5-0 | 5-0 | 5-0 |
| Physics, 9 and 10..... | 5-4 | 5-4 | 5-4 |

SENIOR CLASS.

| | | | |
|--|-----|-----|------|
| Civil Engineering, 28, 60, 30, 31, 32, 57, 34, 19 | 7-5 | 5-6 | 10-6 |
| Mechanical Engineering, 77..... | 0-3 | | |
| Military Science, 3..... | 0-2 | 0-2 | 0-2 |
| Geology and Mining, 4, 8, 9..... | 5-2 | 5-2 | 5-2 |
| History and Civics, 5, 16..... | 5-0 | 5-0 | 5-0 |
| Mathematics, 11, 13..... | 5-0 | 5-0 | 5-0 |
| Geol. and Mining, 7, 7a, 7b..... | 1-4 | 1-4 | 1-4 |

REQUIREMENTS

For the Degree of Bachelor of Science in Electrical Engineering.

| FRESHMAN CLASS. | | | SOPHOMORE CLASS. | | |
|----------------------------------|----------------|-------------|---|----------------|-------------|
| SUBJECT: | HRS. PER WEEK. | | SUBJECT: | HRS. PER WEEK. | |
| (See note p. 75) | 1st T. | 2d T. 3d T. | | 1st T. | 2d T. 3d T. |
| Mathematics, 23..... | 5-0 | 5-0 | Chemistry, 20, 22..... | 5-4 | 5-4 |
| Hygiene..... | 1-0 | | Drawing, 48, 49, 50..... | 0-4 | 0-4 |
| Mathematics, 2..... | 5-0 | | Military Science, 3, 2, 1..... | 0-2 | 0-2 |
| Drawing, 40, 41, 43..... | 0-4 | 0-6 | English, 2, 12, 13..... | 5-0 | 5-0 |
| Military Science, 3..... | 0-2 | 0-2 | Mechanical Eng., 58, 33, 34..... | 0-4 | 0-4 |
| English, 1..... | 5-0 | 5-0 | Mathematics, 25, 27..... | 5-0 | 5-0 |
| History and Civics, 1, 14, 17 .. | 3-0 | 8-0 | Physics, 9 and 10..... | 5-4 | 5-4 |
| Geology and Mining, 1..... | 5-0 | | | | |
| Mechanical Eng., 28, 30, 57..... | 0-4 | 1-6 | SENIOR CLASS. | | |
| Gymnasium..... | 0-2 | 0-2 | | | |
| JUNIOR CLASS. | | | Civil Engineering, 35, 36, 38..... | 2-3 | 5-0 |
| Mechan. Engineering, 37..... | 0-3 | 0-3 | Military Science, 3..... | 0-2 | 0-2 |
| English, 5, 9, 15..... | 5-0 | 5-0 | Electrical Eng., 5, 6, 7..... | 5-6 | 5-6 |
| Electrical Eng., 1, 2, 3..... | 5-3 | 5-3 | History and Civics, 5, 16..... | 5-0 | 5-0 |
| Mathematics, 9, 10..... | 5-0 | 5-0 | Mathematics, 11, 13..... | 5-0 | 5-0 |
| Mechanical Eng., 64, 65..... | 5-3 | 5-3 | Mechanical Engineering, 67, 68 and 78..... | 5-6 | 0-6 |
| Mechan. Engineering, 39..... | 0-4 | 0-4 | | | |
| Military Science, 3..... | 0-2 | 0-2 | | | |

REQUIREMENTS

For the Degree of Bachelor of Science in Mechanical Engineering.

FRESHMAN CLASS.

| SUBJECT: | HRS. PER WEEK. | | |
|----------------------------------|----------------|-------|-------|
| | 1st T. | 2d T. | 3d T. |
| (See note p. 75) | | | |
| Mathematics, 23..... | 5-0 | 5-0 | 5-0 |
| Hygiene..... | 1-0 | | |
| Mathematics, 2..... | 5-0 | | |
| Drawing, 40, 41, 43..... | 0-4 | | |
| Military Science, 3..... | 0-2 | | |
| English, 1..... | 5-0 | | |
| History and Civics, 1, 14, 17 .. | 3-0 | | |
| Geol. and Mining, 1..... | 5-0 | | |
| Mechanical Eng., 28, 30, 57.... | 0-4 | 1-6 | |
| Gymnasium..... | 0-2 | 0-2 | |

JUNIOR CLASS.

| | | | |
|--------------------------------|-----|--|--|
| Mechanical Engineering, 37.... | 0-3 | | |
| Electrical Eng., 8 and 9..... | 5-3 | | |
| English, 5, 9, 15..... | 5-0 | | |
| Mathematics, 9, 10..... | 5-0 | | |
| Mechanical Eng., 39..... | 0-4 | | |
| Mechanical Eng., 64, 65..... | 5-3 | | |
| Military Science, 3..... | 0-2 | | |

SOPHOMORE CLASS.

| SUBJECT: | HRS. PER WEEK. | | |
|---------------------------------|----------------|-------|-------|
| | 1st T. | 2d T. | 3d T. |
| Chemistry, 20 and 22..... | 5-4 | 5-4 | |
| Drawing, 48, 49, 50..... | 0-4 | 0-4 | 0-4 |
| Military Science, 3, 2, 1..... | 0-2 | 0-2 | 3-2 |
| English, 2, 12, 13..... | 5-0 | 5-0 | 5-0 |
| Mechanical Eng., 33, 34, 58.... | 0-4 | 0-4 | 0-8 |
| Mathematics, 25, 27..... | 5-0 | 5-0 | 5-0 |
| Physics, 9, 10..... | 5-4 | 5-4 | 5-4 |

SENIOR CLASS.

| | | | |
|---|-----|--|--|
| Civil Engineering, 35, 36..... | 2-3 | | |
| Mechanical Eng., 66, 68, 69.... | 5-3 | | |
| History and Civics, 5, 16..... | 5-0 | | |
| Mathematics, 11, 13..... | 5-0 | | |
| Mechanical Engineering, 70.... | 2-0 | | |
| Mechanical Engineering, 47.... | 0-4 | | |
| Military Science, 3..... | 0-2 | | |
| Engineering Chemistry..... | 2-3 | | |
| Mechanical Engineering, 71, 72 and 78..... | 0-3 | | |

REQUIREMENTS

For the Degree of Bachelor of Science in the School of Industrial Education.

FRESHMAN CLASS.

| SUBJECT: (See note p. 75) | HRS. PER WEEK. | | |
|--------------------------------|----------------|-------|-------|
| | 1st T. | 2d T. | 3d T. |
| Botany and Forestry, 18..... | 4-4 | | |
| Drawing, 40, 45, 46..... | 0-4 | 0-4 | 0-4 |
| English, 1..... | 5-0 | 5-0 | 5-0 |
| Geology and Mining, 1..... | | 5-2 | 5-2 |
| Gymnasium..... | 0-2 | 0-2 | 0-2 |
| History and Civics, 15..... | 3-0 | 3-0 | 3-0 |
| Hygiene..... | 1-0 | | |
| Philosophy and Sociology, 16.. | 2-0 | 2-0 | 2-0 |
| Mathematics, 2, 23..... | 10-0 | 5-0 | 5-0 |
| Mechanical Eng., 28, 59..... | 0-4 | 0-4 | 0-4 |
| Military Science, 3..... | 0-2 | 0-2 | 0-2 |

JUNIOR CLASS.

| | | | |
|--|-----|-----|-----|
| English, 5, 9, 16..... | 5-0 | 5-0 | 5-0 |
| Philosophy and Sociology, 11, 12, 13..... | 5-0 | 5-0 | 5-0 |
| Military Science, 1, 2, 3..... | 0-2 | 3-2 | 0-2 |
| Mod. Languages, 14, 18 or 30.. | 5-0 | 5-0 | 5-0 |
| Agronomy, 13..... | 3-4 | | |
| Mathematics, 27..... | | | |
| History and Civics, 18..... | 3-0 | 3-0 | 5-0 |
| Mechanical Engineering, 61, 60, 76, 35, 73..... | 1-4 | 1-4 | 3-0 |

SOPHOMORE CLASS.

| SUBJECT: | HRS. PER WEEK. | | |
|---------------------------------|----------------|-------|-------|
| | 1st T. | 2d T. | 3d T. |
| Agronomy, 16..... | | | 3-4 |
| Chemistry, 21 and 23..... | | 3-4 | 3-4 |
| English, 2, 12, 13..... | | 5-0 | 5-0 |
| History and Civics, 10..... | | | 5-0 |
| Horticulture, 25..... | 3-4 | | |
| Philosophy and Sociology, 9.... | | 5-0 | 5-0 |
| Mathematics, 25..... | 5-0 | 5-0 | |
| Military Science, 3..... | | 0-2 | 0-2 |
| Physics, 7 and 8..... | | 5-4 | 5-4 |
| Mechan. Eng., 57, 60, 62..... | | 0-4 | 1-4 |

SENIOR CLASS.

| | | | |
|--|-----|-----|-----|
| English, 17, 18, 19..... | 0-2 | 0-2 | 0-2 |
| Geology and Mining, 2..... | 5-2 | | |
| History and Civics, 5, 16..... | 5-0 | 5-0 | |
| Philosophy and Sociology, 10, 14, 15..... | 5-0 | 5-0 | 5-0 |
| Modern Languages, 16 or 20.... | 5-0 | 5-0 | 5-0 |
| Military Science, 3..... | 0-2 | 0-2 | 0-2 |
| Public Discourse..... | | 3-2 | |
| Markets and Rural Econ., 1.... | | | 5-0 |
| Electives..... | 3-4 | 3-4 | 6-8 |

COMPARISON OF COURSES IN THE FOUR SCHOOLS OF INSTRUCTION.

On the following pages are given the subjects required for graduation in each of the four school placed side by side, so that the student may more easily select his course:

| FRESHMAN CLASS REQUIRED SUBJECTS. | TOTAL CREDIT HOURS IN: | | | |
|---|------------------------|-------------|--------------|--------------|
| | Agriculture | Engineering | Indus. Educ. | Gen. Science |
| Agricultural Engineering (2T, 0-2)..... | 2 | | | |
| Agronomy, 2 (1T, 4-2)..... | 5 | | | |
| Agronomy, 16 (2T, 4-0)..... | 8 | | | |
| Botany, 1 (1T, 2-4)..... | 3 | | | |
| Botany, 18 (1T, 4-4)..... | | | 6 | |
| Botany, 19 (1T, 5-0)..... | | | | 5 |
| Civil Engineering (Drawing), 40 (1T, 0-4)..... | 2 | 2 | 2 | 2 |
| Civil Engineering (Drawing), 47 (1T, 0-2)..... | 1 | | | |
| Civil Engineering (Drawing), 41 (1T, 0-6)..... | | 3 | | |
| Civil Engineering (Drawing), 43 (1T, 0-6)..... | 3 | | | |
| Civil Engineering (Drawing), 45 (1T, 0-4)..... | | | 2 | 2 |
| Civil Engineering (Drawing), 46 (1T, 0-4)..... | | | 2 | 2 |
| English, 8 (3T, 3-0)..... | 9 | | | |
| English, 1 (3T, 5-0)..... | | 15 | 15 | 15 |
| Geology (Physiography), 1 (1T, 3-0)..... | 3 | | | |
| Geology (Physiography), 1a (1T, 5-0)..... | | 5 | | |
| Geology (Physiography), 1b (1T, 5-2)..... | | | 6 | |
| Gymnasium, 1 (3T, 0-2)..... | 3 | 3 | 3 | 3 |
| History (English), 1 (1T, 3-0)..... | 3 | 3 | | 3 |
| History (Mediaeval and Modern), 14 (2T, 3-0)..... | 6 | 6 | | 6 |
| History (Civics), 17 (1T, 5-0)..... | | 5 | | |
| History (Mediaeval and Modern), 15 (3T, 3-0)..... | | | 9 | |
| Hygiene, 1 (1T, 1-0)..... | 1 | 1 | 1 | 1 |
| Mathematics (Geometry), 22 (3T, 3-0)..... | 9 | | | |
| Mathematics (Book-keeping), 2 (1T, 5-0)..... | 5 | 5 | 5 | 5 |
| Mathematics (Geometry), 23 (3T, 5-0)..... | | 15 | 15 | 15 |
| Mechanical Engineering, 28 (1T, 0-4)..... | 2 | 2 | 2 | 2 |
| Mechanical Engineering, 30 (1T, 0-6)..... | | 3 | | |
| Mechanical Engineering, 57 (1T, 1-6)..... | | 4 | | |
| Mechanical Engineering, 59 (2T, 0-4)..... | | | 4 | |
| Mechanical Engineering, 54 (2T, 0-4)..... | | | | 4 |
| Military Science, 3 (3T, 0-2)..... | 3 | 3 | 3 | 3 |
| Physics, 5 (2T, 3-0)..... | 6 | | | |
| Physics, 6 (2T, 0-2)..... | 2 | | | |
| Poultry, 1 (1T, 0-2)..... | 1 | | | |

SOPHOMORE CLASS REQUIRED SUBJECTS.

A credit hour is one hour a week for one term, *i. e.*, 12 weeks. The number after the course below identifies it in the detailed statement in the catalog. (1T), (2T), (3T) is the length of the course in terms; remaining figures, 3-4, etc., show the recitation and laboratory periods per week, the first number being recitations.

TOTAL CREDIT HOURS IN:

| | Agriculture | Engineering | Indus. Educ. | Gen. Science |
|--|-------------|-------------|--------------|--------------|
| Agronomy, 16 (1T, 3-4) | | | 5 | |
| Animal Husbandry, 1, 2 (1T, 4-2) | 5 | | | |
| Botany, 2, 3, 5 (3T, 2-4) | 12 | | | |
| Botany, 20 (1T, 5-4) | | | | 7 |
| Chemistry, 1 (3T, 4-0) | 12 | | | |
| Chemistry, 5 (3T, 0-6) | 6 | | | |
| Chemistry, 21 (3T, 3-0) | | | 9 | |
| Chemistry, 22 (3T, 0-4) | | | 6 | |
| Chemistry, 21 (3T, 5-0) | | 7 | | |
| Chemistry, 20 (1T, 5-4) | | 7 | | |
| Civil Engineering (Drawing), 48 (1T, 0-4) | | 2 | | |
| Civil Engineering (Drawing), 49 (1T, 0-4) | | 2 | | |
| Civil Engineering (Drawing), 50 (1T, 0-4) | | 2 | | |
| Dairying, 2 (1T, 3-2) | 4 | | | |
| English, 10 (1T, 3-0) | 3 | | | |
| English, 2 (1T, 5-0) | | 5 | 5 | 5 |
| English, 11 (1T, 3-0) | 3 | | | |
| English, 12 (1T, 5-0) | | 5 | 5 | 5 |
| English, 14 (1T, 3-0) | 3 | | | |
| English, 13 (1T, 5-0) | | 5 | 5 | 5 |
| Geology, 2 (1T, 5-4) | | | | 7 |
| History (Mediaeval and Modern), 10 (1T, 5-0) | | | 5 | |
| Horticulture, 25 (1T, 3-2) | 4 | | | |
| Horticulture, 25 (1T, 3-4) | | | 5 | |
| Industrial Education (Psychology), 9 (2T, 5-0) | | | 10 | |
| Mathematics, 24 (2T, 3-0) | 6 | | | |
| Mathematics, 26 (1T, 3-0) | 3 | | | |
| Mathematics, 25 (2T, 5-0) | | 10 | 10 | 10 |
| Mathematics, 27 (1T, 5-0) | | 5 | | |
| Mechanical Engineering, 33 (2T, 0-4) | | 4 | | |
| Mechanical Engineering, 34 (1T, 0-4) | | 2 | | |
| Mechanical Engineering, 58 (1T, 0-4) | | 2 | | |
| Mechanical Engineering, 57 (1T, 1-0) | | | 1 | |
| Mechanical Engineering, 60 (2T, 0-4) | | | 4 | |
| Mechanical Engineering, 62 (1T, 0-4) | | | 2 | |
| Military Science, 1, 2 (1T, 3-0) | 3 | | | |
| Military Science, 1, 2 (1T, 5-0) | | 5 | | |
| Military Science, 3 (3T, 0-2) | 3 | 3 | 3 | 3 |
| Physics, 9, 10 (3T, 5-4) | | 21 | | |
| Physics, 7, 8 (2T, 5-4) | | | 14 | 14 |
| Zoology, 15 (1T, 4-2) | 5 | | | 5 |
| Zoology, 17 (1T, 4-6) | | | | 7 |

JUNIOR CLASS REQUIRED SUBJECTS.

TOTAL CREDIT HOURS IN:

A credit hour is one hour a week for one term, i. e., 12 weeks. The number after the course below identifies it in the detailed statement in the catalog. (1T), (2T), (3T) is the length of the course in terms; remaining figures, 3-4, etc., show the recitations and laboratory periods per week, the first number being recitations.

| | Agriculture | Civil Eng'ng | Elec. Eng'ng | Mch. Eng'ng | Indus. Educ. | Gen. Science* |
|--|-------------|--------------|--------------|-------------|--------------|---------------|
| Agricultural Engineering, 3 (1T, 3-4) | 5 | | | | | |
| Agronomy, 9 (1T, 4-2) | 5 | | | | | |
| Agronomy, 15 (1T, 4-4) | 6 | | | | | |
| Agronomy, 13 (1T, 3-4) | | | | | 5 | |
| Animal Husbandry, 3 (1T, 4-2) | 5 | | | | | |
| Chemistry, 2 (1T, 4-0) | 4 | | | | | |
| Chemistry, 3 (1T, 4-0) | 4 | | | | | |
| Chemistry, 4 (1T, 0-5) | 2½ | | | | | |
| Chemistry, 14 (1T, 0-5) | 2½ | | | | | |
| Chemistry, 11 (1T, 2-6) | | 5 | | | | |
| Civil Engineering, 21 (1T, 5-0) | | 5 | | | | |
| Civil Engineering, 22 (1T, 0-9) | | 4½ | | | | |
| Civil Engineering, 23 (1T, 5-0) | | 5 | | | | |
| Civil Engineering, 24 (1T, 0-9) | | 4½ | | | | |
| Civil Engineering, 25 (1T, 0-9) | | 4½ | | | | |
| Civil Engineering, 59 (1T, 4-0) | | 4 | | | | |
| Civil Engineering, 27 (1T, 4-0) | | 4 | | | | |
| Civil Engineering (Drawing), 37 (3T, 0-3) | | | 4½ | | | |
| Dairying, 5 (1T, 4-4) | 6 | | | | | |
| Electrical Engineering, 1 (1T, 5-3) | | | 6½ | | | |
| Electrical Engineering, 2 (1T, 5-3) | | | 6½ | | | |
| Electrical Engineering, 3 (1T, 5-3) | | | 6½ | | | |
| Electrical Engineering, 8 (18 weeks, 5-3) | | | | 9¾ | | |
| Electrical Engineering, 9 (18 weeks, 5-3) | | | | 9¾ | | |
| English, 5 (1T, 5-0) | | 5 | 5 | | 5 | |
| English, 9 (1T, 5-0) | | 5 | 5 | | 5 | |
| English, 15 (1T, 5-0) | | 5 | 5 | | | |
| English, 16 (1T, 5-0) | | | | 5 | | |
| Geology, 3 (1T, 5-2) | | 6 | | | | |
| Geology, 5 (1T, 5-2) | | 6 | | | | |
| Geology, 12 (1T, 5-4) | | | | | | 7 |
| History, 18 (3T, 3-0) | | | | | 9 | |
| Horticulture, 26 (1T, 4-2) | 5 | | | | | |
| Industrial Education, 11 (1T, 5-0) | | | | | 5 | |
| Industrial Education, 12 (1T, 5-0) | | | | | 5 | |
| Industrial Education (Sociology), 13 (1T, 5-0) | | | | | 5 | |
| Markets, 1 (1T, 2-2) | 3 | | | | | |
| Mathematics, 9 (1T, 5-0) | | 5 | 5 | 5 | | |
| Mathematics, 27 (1T, 5-0) | | | | | 5 | |
| Mechanical Engineering, 64 (3T, 2-0) | | | 1 | 1 | | |
| Mechanical Engineering, 64 (1T, 0-3) | | | 1½ | 1½ | | |
| Mechanical Engineering, 65 (3T, 3-0) | | | 3 | 3 | | |
| Mechanical Engineering, 65 (2T, 0-3) | | | 3 | 3 | | |
| Mechanical Engineering, 39 (3T, 0-4) | | | 6 | 6 | | |
| Mechanical Engineering, 37 (3T, 0-3) | | | | 4½ | | |
| Mechanical Engineering, 61 (1T, 0-4) | | | | | 2 | |
| Mechanical Engineering, 76 (1T, 0-4) | | | | | 2 | |
| Mechanical Engineering, 35 (1T, 0-4) | | | | | 2 | |
| Mechanical Engineering, 73 (1T, 1-0) | | | | | 1 | |
| Military Science, 3 (3T, 0-2) | 3 | 3 | 3 | 3 | 3 | 3 |
| Military Science, 1 and 2 (1T, 5-0) | | | | | 5 | 5 |
| Modern Language (French), 14 (3T, 5-0), or | | | | | | |
| Modern Language (German), 18 (3T, 5-0), or | | | | | 15 | |
| Modern Language (Spanish), 30 (3T, 5-0), | | | | | | |
| Poultry, 2 (1T, 3-2) | 4 | | | | | |
| Veterinary Medicine, 8 (1T, 4-2) | 5 | | | | | |
| Zoology, 1 (1T, 2-4) | 4 | | | | | |
| Zoology, 2 (1T, 2-4) | 4 | | | | | |

* 60 hours elective in General Science Course.

SENIOR CLASS REQUIRED SUBJECTS.

A credit is one hour a week for one term, i. e., 12 weeks. The number after the course below identifies it in the detailed statement in the catalog. (1T), (2T), (3T) is the length of the course in terms; remaining figures, 3-4, etc., show the recitations and laboratory periods per week, the first number being recitations.

| | TOTAL CREDIT HOURS IN: | | | | | |
|--|------------------------|----------------|----------------|---------------|--------------|----------------|
| | Agriculture | Civil Eng'n'ng | Elec. Eng'n'ng | Mch. Eng'n'ng | Indus. Educ. | Gen. Science * |
| Agricultural Engineering, 7 (1T, 3-5)..... | 5½ | | | | | |
| Bacteriology, 1 (1T, 2-6) | 5 | | | | | |
| Botany, 7 (1T, 2-2)..... | 3 | | | | | |
| Chemistry, 13 (2T, 5-9)..... | | | | 19 | | |
| Civil Engineering, 19 (1T, 5-0)..... | | 5 | | | | |
| Civil Engineering, 28 (1T, 5-0; 1T, 3-0)..... | | 8 | | | | |
| Civil Engineering, 60 (1T, 2-0)..... | | 2 | | | | |
| Civil Engineering, 30 (1T, 0-5)..... | | 2½ | | | | |
| Civil Engineering, 31 (1T, 5-0)..... | | 5 | | | | |
| Civil Engineering, 32 (1T, 0-6)..... | | 3 | | | | |
| Civil Engineering, 34 (1T, 0-6)..... | | 3 | | | | |
| Civil Engineering, 57 (1T, 2-0)..... | | 2 | | | | |
| Civil Engineering, 35 (1T, 2-0)..... | | | 2 | 2 | | |
| Civil Engineering, 36 (1T, 0-3)..... | | | 1½ | 1½ | | |
| Civil Engineering, 38 (1T, 5-0)..... | | | 5 | | | |
| Electives..... | 40 | | | | 20 | 75 |
| Electrical Engineering, 5, 6, 7 (3T, 5-6)..... | | | 24 | | | |
| English, 17, 18, 19 (3T, 2-0) | | | | | 6 | |
| Geology, 4, 8, 9 (3T, 5-2) | | 18 | | | | |
| Geology, 7 (3T, 1-4)..... | | 9 | | | | |
| Geology, 2 (1T, 5-2)..... | | | | | 6 | |
| History, 19 (1T, 3-0)..... | 3 | | | | | |
| History (Economics), 5 (1T, 5-0)..... | | 5 | 5 | 5 | 5 | |
| History (Political Science), 16 (1T, 5-0)..... | | 5 | 5 | 5 | 5 | |
| Industrial Education 10 (1T, 5-0)..... | | | | | 5 | |
| Industrial Education (Logic), 14 (1T, 5-0)..... | | | | | 5 | |
| Industrial Education (Ethics), 15 (1T, 5-0)..... | | | | | 5 | |
| Industrial Edu. (Public Speaking), 22 (1T, 3-2)..... | | | | | 4 | |
| Markets, 1 (1T, 5-0)..... | | | | | 5 | |
| Mathematics, 11, 13 (2T, 5-0)..... | | 10 | 10 | 10 | | |
| Mechanical Engineering, 7 (1T, 0-3)..... | | 1½ | | | | |
| Mechanical Engineering, 67 (1T, 3-0)..... | | | 3 | | | |
| Mechanical Engineering, 67 (3T, 0-3)..... | | | 4½ | | | |
| Mechanical Engineering, 68 (1T, 2-0)..... | | | 2 | 2 | | |
| Mechanical Engineering, 78 (3T, 0-3)..... | | | 4½ | 4½ | | |
| Mechanical Engineering, 66 (1T, 3-0)..... | | | | 6 | | |
| Mechanical Engineering, 66 (3T, 0-3)..... | | | | 4½ | | |
| Mechanical Engineering, 69 (1T, 2-0)..... | | | | 2 | | |
| Mechanical Engineering, 71 (1T, 3-0)..... | | | | 3 | | |
| Mechanical Engineering, 72 (1T, 2-0)..... | | | | 2 | | |
| Mechanical Engineering, 70 (1T, 2-0)..... | | | | 2 | | |
| Mechanical Engineering, 47 (3T, 0-4)..... | | | | 6 | | |
| Military Science, 3 (3T, 0-2)..... | 3 | 3 | 3 | 3 | 3 | 3 |
| Modern Language (German), 20 (3T, 5-0), or | | | | | | |
| Modern Language (French), 16 (3T, 5-0)..... | | | | | 15 | |
| Zoology, 3 (1T, 2-4)..... | 4 | | | | | |

*All General Science work elective.

DEPARTMENTS OF INSTRUCTION.

AGRICULTURAL ENGINEERING.

Professor SCOATES.

Mr. CARPENTER.

Mr. NAFF.

The real purpose of this department is to train students of the Agricultural School in the engineering problems found on the farm. There is, however, a demand for men specially fitted in agricultural engineering and in view of this fact the department offers the use of its equipment to any who wish to take special work along this line.

The demand for agricultural engineers, here in the South, is, perhaps, greater than in any other section of the country. It seems that an engineer who understands agriculture is a rare man and yet it is a combination to be desired. On the farm are found engineering problems that fall within the scope of most of the engineering fields. Yet to apply the engineering sciences to the farm one must understand farm conditions. It has been on account of these facts that today the demand for agricultural engineers has not only come from the schools and colleges, but also the large plantations, drainage and irrigation districts, farm implement firms, U. S. government, railroads, etc.

EQUIPMENT.

Farm Machinery Laboratory.—A new two story building, 40 x 100 has been erected for this laboratory. Here will be found a large number of the different farm machines and various makes of the same machines; also facilities for comparing and testing the machines in laboratory and field.

Agricultural Surveying and Drainage.—The equipment consists of one transit, fourteen levels, together with rods, tapes, poles, pins, and all other instruments necessary for

farm surveying. A collection of home-made farm levels are on hand.

Farm Buildings.—A large draughting room supplied with blue prints, photographs, and models of farm buildings. A department library well stocked with books bearing on this subject.

Farm Motors.—Nine gasoline engines, three gas tractors, hot air engine, and a farm electric lighting plant, together with all apparatus for testing same.

Concrete Construction.—Apparatus for testing cement, concrete and aggregate; also forms and machines, both home-made and commercial, for making various concrete structures found on the farm.

COURSE OF STUDY.

3. **Farm Machinery.**—This course embraces the study of machinery used on the farm; tillage, harvesting, threshing, pumping, etc. The object is to acquaint the student with the design, construction, and operation of machinery used on the farm. The student will be given an opportunity to compare implements as to strength, workmanship, and general adaptability. The practical study will consist of a detailed study of a machine in the laboratory. *Three periods theoretical, and four periods practical. Required first term, Agricultural Juniors.*
4. **Farm Buildings.**—This course consists of a systematic study of farm buildings, their arrangement, location, structure, ventilation, lighting and cost. The student will be required during the practical time, to design and draw plans for farm buildings. *Three periods lecture, and six periods practical. Elective, Agricultural Seniors.*
5. **Farm Motors.**—The object of this course is to acquaint the student with the theory and practice of farm motors. The practical work will consist of running and testing the various motors in the laboratory. Prerequisite, A. E., 3. *Two periods theory, and four practical. Elective, Agricultural Seniors.*
6. **Concrete Construction.**—The object of this course is to give the student a working knowledge of the testing of cement,

concrete, and aggregate. Further, to get him familiar with the actual operations of mixing and placing concrete, by having him make some of the concrete structures found on the farm. *One period theory, and two periods practical. Elective, Agricultural Seniors.*

7. Agricultural Surveying and Drainage.—The object of this course is to enable the student to do accurately all kinds of farm surveying and get a practical knowledge of the different kinds of land drainage—surface and sub-surface—such as hillside ditches, terracing, open ditches, and tiling. In addition to the theoretical study of these subjects, students make surveys of parts of the farm with tapes and level, compute areas, make maps and lay tile. *Prerequisite, Mathematics 8. Three periods theoretical, and five periods practical. Required first term, Agricultural Seniors.*

8. Road Construction and Maintenance.—The object of this course is to give the student a working knowledge of the different kinds of roads, their construction and maintenance. *One period theory, and two periods practical. Elective, Agricultural Seniors.*

9. Farm Machinery and Farm Motors.—This course embraces the study of farm machinery and farm motors, such as is needed on the farms of this state. Their construction, management, and repair are studied both in class room and in laboratory. *Three periods theoretical, and four periods practical. Required third term, first year, Two-Year Agriculture students.*

10. Farm Buildings.—This course embraces the study of barns, hog houses, poultry houses, farm homes and all farm buildings; their arrangement, design and construction. *Three periods theoretical and four periods practical. Required, second term. Second year, Two-Year Agriculture students.*

11. Spraying Apparatus.—A brief course in the construction and operation of pumps and spraying machinery. This course is especially designed for those expecting to engage in fruit farming. *One period theoretical, and two periods practical. Elective, Agricultural Seniors.*

2. Research.—This course allows the student to follow some line of research in any of the subjects taught in Agricultural Engineering. *Five hours credit. Elective, Agricultural Seniors.*

13. **Farm Mathematics.**—This is an elementary course in mathematics in which all the problems are such as the average farmer would meet. *Three periods theoretical. Required, first term, first year, Two- Year Agriculture students.*
14. **Farm Mathematics.**—This is an advanced course in mathematics in which the student is taught not only how to figure areas of land, grade of ditches, etc., but is also required to go in the fields and do the actual work. This course also covers methods of surveying and draining land. *Three periods theoretical and four periods practical. Required, second term. First Year, Two- Year Agriculture students.*
15. **Farm Mechanics.**—This course gives the student practical instruction in fitting of harness, hitching up horses, operation of farm machinery, assembling and repairing farm machinery. *Two periods practical. Required, first term, Agricultural Freshmen.*
16. **Farm Mechanics.**—This course gives the student practical instruction in rope tying and splicing, belt lacing, repair of harness, soldering, pipe fitting and babbitting. *Two periods practical. Required, second term, Agricultural Freshmen.*

AGRONOMY.

Professor ROBERT.

Associate Professor CRITZ.

Assistant Professor WEST.

The course in Agronomy is designed to familiarize the student with the principles underlying productive soils and plant growth. The importance of applying economic business principles to crop husbandry cannot be overestimated. The fundamental principles underlying successful soil management should be understood by every farmer. Theory without practice is of very little value. Practice without theory is at best expensive and a hard school master.

An agricultural collegiate training may not make a man practical, but it will give a practical man theoretical knowl-

edge about basic agricultural principles which not only makes his work more pleasant but also more remunerative financially. Our aim is to prepare young men to successfully solve the practical problems of farm life, and to fit them for educational and research work.

Instruction in this department is given by text-books and lectures, supplemented by practical work in the agronomy laboratories, greenhouse, demonstration field plats, and experiment station and college fields.

OUTLINE OF COURSES.

16. **Elements of Agriculture.**—This covers in an elementary way many of the basic principles of agricultural work. Special attention is paid to the subjects—soils, fertilizers and feed stuffs. Detailed study of the best methods of improving field crops. Practical instruction is given in the demonstration field plats and experimental fields. *First and second terms; four hours per week. Required of all Agricultural Freshmen.*
2. **Soils.**—The soil is first studied as a medium for root development, and second, as a reservoir for water. The student then takes up a study of the plant nutrients in the soil, alkali soils, manures and fertilizers, organisms in the soil, the soil air, heat of the soil, also external factors in soil management, such as tillage, adaptation of crops to soils, relation of soil productiveness to crop rotations, etc. A full course in the physical properties of soils is given in the laboratory. *Third term, Freshman class; four hours class-room, and two hours laboratory work. Required of all Agricultural Freshmen.*
15. **Soil Fertility.**—An advanced course dealing with systems of permanent agriculture; soil investigations by culture of experiments, recent theories regarding soil fertility and the uses of fertilizers, together with a consideration of various other fertility factors, such as manufactured commercial fertilizers, crop stimulants and protective agents, critical periods in plant life, farm manure, losses of plant food from plants, losses of plant food from soils, fixation of plant food by soils; methods of testing various constituents, relation of fertility to appearance of soils, factors in crop production, essential factors of success in farming, the value of land, etc.

Second term; four hours class-room and four hours laboratory and field plat work. Required of all Agricultural Juniors.

- 9. Grasses and Forage Crops.**—A course dealing especially with the production, harvesting, and curing of the most important grasses and forage crops. Special attention is given to the seeding and care of permanent and temporary pastures. The laboratory work consists of a full course in examining and grading grains. *Third term; four hours class-room and two hours laboratory and field work. Required of all Agricultural Juniors.*
- 14. Plant Breeding.**—A course dealing with the improvement of such field crops as cotton, corn, wheat, oats, the important grasses and legumes. Special attention is given to variation, selection, hybridization, and the isolation of elementary species. The laboratory work consists of a full course in cotton grading. *Second term; three hours in class-room and two hours in field or laboratory. Elective for Agricultural Seniors.*
- 4. Farm Management.**—This course is intended to teach the student the application of all the principles underlying successful agriculture to the management of the farm. Special attention is given to the proper organization of the factors of production on the farm, land, labor, and capital; to the proper adaptation of farm practice to the environment of the farmer; and to the proper disposal of farm produce, all with the view of maintaining at the same time the integrity of the land and equipment. *Third term; three hours per week in the class room and two hours per week practical work. Elective for Agricultural Seniors.*
- 16. Soils.**—This course covers practically the same work as No. 2. *Three hours in class room and four hours in laboratory; Third term. Required of all Pedagogical Sophomores.*
- 13. Farm Crops.**—Course dealing with the composition, value and uses of the most important field crops, together with the best methods of crop improvement. The laboratory work consists of a full course in corn judging. *First term three hours per week in class room and four hours in laboratory. Required of Pedagogical Juniors.*
- 17. First Principles of Agriculture.**—An elementary course in Agriculture designed to teach the factors of productive soils and

plant growth. *First year, first term Two Year Course students in Agriculture; three hours class room and two hours laboratory and field work per week.*

18. **Crop and Soil Improvements.**—This is an elementary treatise on the common field crops, and best methods of soil improvements. *Three hours per week class room, and two hours laboratory and field work. Required of all Two Year Agricultural students.*
19. **Elements of Agriculture.**—This course covers in an elementary way the work given students in the Freshman class as outlined in No. 2. *Required of all Two Year students in Agriculture. First term, second year.*
20. **Fertilizers and Legumes.**—This course is designed to familiarize the student with the best methods of making practical soil tests for fertilizer requirements. Various methods of crop rotation as applied to Mississippi soils, and our most important leguminous plants are discussed. *Required of all Two Year Agricultural Students. Second term, second year. Three hours class room work, and two hours laboratory and field work.*
21. **Forage Crops.**—A detailed study is made of common forage crops and their best methods of raising and preserving. *Required of all Two year Agricultural students. Third term, second year. Three hours class room and two hours field work*
22. **Business Methods.**—This course is given with view of increasing the efficiency of farm work, and better preparing the student to conduct his business. He will be taught how to conduct a business correspondence, to express himself correctly, keep farm records, organize and conduct agricultural clubs, farmers' institutes, and like organizations. *Required of all Two Year students in Agriculture. First and Second term, first year. Three hours per week.*
24. **Outline of Graduate Work for Students Pursuing their Minor Course for the Master of Science Degree in Agronomy.**—Students taking their Master's course who elect minor work in Agronomy are required to spend, at least, one-third of their year's resident work in this department. The completion of the work will require equivalent of about six course hours post-graduate work, exclusive of laboratory and field

work, and other agricultural readings. Upon completion of each subject assigned, the student will make arrangements with the head of the department for a written examination. Students are urged to confer freely with the head of the departments regarding their text-book and library work. The practical work of this course consists in demonstration field plat work, and the cultivation, harvesting and mounting of the more common grain crops, clovers, and grasses. The student is required to make crosses of common field crops and laboratory collections of the same. We give below a few books that will be used as texts. The student will be furnished names of a number of bulletins and other agricultural literature that will constitute a part of his regular course of study.

- "Forage and Fiber Crops for the South," by S. M. Tracy;
- "Meadows and Pastures," by Wing;
- "The Cereals in America," by Hunt;
- "Soils and Crops," by Hunt and Burkett;
- "Fodder and Pasture Plants," by Clark and Malte;
- "Clovers and How to Grow Them," by Shaw.
- "Soil Fertility and Permanent Agriculture," by Hopkins.

25. **Outline of Graduate Work for Students Pursuing their Major Course for the Master of Science Degree in Agronomy.**—The work herewith outlined embraces in the main detailed studies of soils, plant food and field crops. For the completion of this work the equivalent of not less than fifteen course hours post-graduate work exclusive of thesis, laboratory, field work, and assignment of bulletins, current literature and other agricultural readings will be required. The thesis must be approved not later than the beginning of the second term, and should occupy at least one-half of the student's time during the second and third term. Each candidate for the Master's Degree will be required to make and deliver to the Department of Agronomy not less than one hundred hybrids of the more common field crops, and to complete such pot cultures and demonstration plat work as will be outlined by this department. The details of all practical work in the greenhouse, laboratory and demonstration plats are to be neatly compiled and turned over to this department with the thesis. The books enumerated below are to be used as texts, and will constitute a part of the theoretical work done by the student. Upon completion of each text the

student will stand a written and oral examination on the subject covered.

"Soils and Soil Fertility," by Whitson and Walster;
"Soils and Crops," by Hunt and Burkett;
"Soils Fertility and Permanent Agriculture," by Hopkins;
"Soils," by Hilgard;
"Physics of Agriculture," by King;
"The Corn Crops," by Montgomery;
"The Cereals in America," by Hunt;
"Forage Crops for the South," by Tracy;
Warren's "Farm Management";
"Meadows and Pastures," by King;
"Alfalfa," by Coburn;
"Clovers," by Shaw;
"Grasses," by Spillman;
"Fodder and Pasture Plants," by Clark and Malte;
"Plant Breeding," by Bailey;
"Punnett's Mendelism";
"Diseases of Plants," by Stevens and Hall;
"Growing Cotton," by Mercier and Savely.

ANIMAL HUSBANDRY.

Professor SMITH.

Assistant Professor HADDON.

The courses offered in this department treat, in as direct and practical a way as possible, all subjects which pertain to the judging, selecting, breeding, feeding, improvement, care and management of live stock.

Theoretical instruction is given both from text-books and lectures and practical work in score card and comparative judging.

The department is well equipped with all the prominent breeds of beef and dairy cattle, heavy and light horses and mules, bacon and lard types of hogs; and the student is given every opportunity to become proficient in the judging, feeding and management of live stock.

OUTLINE OF COURSES.

1. **Breeds of Sheep and Swine.**—A study of the history, development, characteristics, and adaptations of the types and breeds, and discussion of market classes of sheep and swine. *One half term; four hours per week recitation and two hours per week judging live stock. Required of all Agricultural Sophomores; third term.*
2. **Breeds of Cattle.**—A study of the several breeds and market classes of beef, dual purpose and dairy cattle. Covers the subject of cattle on the same basis as course 1. *One-half term; four hours per week in class room, and two hours per week judging live stock. Required of all Agricultural Sophomores; third term.*
3. **Feeding Animals.**—A study of the character and composition of feed stuffs, and method of feeding farm animals under varying conditions. Work to a reasonable extent is required of students in calculating rations and in studying rations in practical use in the community and suggesting improvements if desirable. The economy of the subject is carefully considered. *One term; four hours per week in class room; two hours per week practical. Required of all Agricultural Juniors; first term.*
14. **Principles of Breeding.**—A study of the subjects of heredity'—from various points of view in its applications to breeding farm animals. *Elective. One term; five hours per week in class room, and two hours per week is devoted to studying pedigree construction and working out problems in heredity from herd books. For Agricultural Seniors, second term.*
5. **Horses and Mules.**—A study of the types and breeds of horses and adaptations of types of both horses and mules. Excellent opportunities are offered for study of types of mules,—and types of mares best suited for mule raising. *Elective. One term; three hours per week in class room, and two hours per week practical. For Agricultural Seniors, first term.*
15. **Advanced Stock Feeding.**—A study of the most economical and best methods of feeding farm stock and preparing them for market or exhibition. Special attention is given to the use of home grown feeds. *Elective. One term; four hours per week in class room. For Agricultural Seniors, first term.*

16. A brief study of the most important breeds and market classes of live stock. *One term; three hours per week in class room and two hours per week judging live stock. Required of all students in the Agricultural Short Course, second term, first year.*
17. A study of the most economical methods of feeding farm animals, with special reference to the use of home grown feeds. *One term; three hours per week in class room and two hours per week practical. Required of all students in the Agricultural Short Course, first term, second year.*
18. A study of the principles of breeding and the methods of improving, marketing and caring for live stock. *One term; three hours per week in class room and two hours per week judging horses and mules. Required of all students in the Agricultural Short Course, third term, second year.*

BACTERIOLOGY.

Professor BRISCOE.

Mr. HARNED.

1. **General Bacteriology.**—In this course the student will be made acquainted with the technique of bacteriology. He will learn to recognize, stain, culture, and classify bacteria; will study their chemical and physiological processes, and methods of combating their activities. A brief general text will be followed in the lectures. *Two hours a week recitation, and six hours in the laboratory. First term. Required of Agricultural Seniors; offered to all students prepared for the work. Prerequisite, one term in chemistry, and two terms in botany and zoology.* Professor BRISCOE and Mr. HARNED.
2. **Soil Bacteriology.**—This course will deal with bacteria in relation to soils and crops. A study of the chemical and physiological actions of these organisms will be made in a series of selected experiments. *Elective. One hour a week recitation; three hours laboratory practice; third term. Prerequisite, course 1.* Professor BRISCOE and Mr. HARNED.
3. **Dairy Bacteriology.**—In this course will be considered the bacteria of milk and milk products. Attention will be given to bacteria useful in dairying and to the subject of sanitary

milk and its relation to public health. *Elective. One hour a week recitation; three hours laboratory practice. Third term. Prerequisite, course 1.*

Professor BRISCOE and Mr. HARNED.

4. **Veterinary Bacteriology.**—A course in the microbiology of animal diseases. Brief studies will be made of the organisms in relation to the common diseases of farm animals and household pets. Demonstrations and laboratory work will be given, using the common test animals, guinea-pigs, rabbits, etc. *Elective. Two hours a week recitation; six hours laboratory practice. Second term. Prerequisite, course 1.*

Professor BRISCOE and Mr. HARNED.

5. **Graduate Work.**—The work in this course is arranged with each individual student. Graduates of this or other colleges may take up any line of bacteriological research agreed upon with the one in charge. *Hours and credits to be arranged. Either minor or major work may be taken. Laboratories open from 8:30 a. m. to 5 p. m.*

Professor BRISCOE.

6. **Elementary Bacteriology.**—This course deals with elementary questions of bacteriology as applied to every day life on the farm. It consists of a series of lectures and demonstrations on Agricultural bacteriology including a study of the bacteria of milk, soil, and bacteria causing diseases of farm animals. *Four hours lecture work, and four hours field and laboratory demonstrations. Required of all Two Year Agricultural students; third term, second year.*

Professor BRISCOE and Mr. HARNED.

BIOLOGY.

See Botany, and Forestry, and Zoology and Entomology.

BOOKKEEPING.

See Mathematics.

BOTANY AND FORESTRY.

Professor BROWN.

Mr. BEAL.

It is the aim of this department to acquaint students with plants and the fundamental principles governing their life processes. Courses are planned to awaken an interest in the plant world, to give some technical knowledge of plants such as is needed in a well rounded education, and to give certain training which will be helpful in growing plants on the farm or in carrying on work in the different lines of plant industry.

1. **Farm Botany.**—This course endeavors to give the student an outline of the life history of the higher plants, and some acquaintance with the groups into which they are divided. Stress is laid upon the structure and nature of seeds, conditions favoring germination, growth of plants, development of flowers, fruit, etc. Students are taught how to use a manual in identifying plants, and about fifty common plants which flower in the spring are collected and identified. *One term; two hours per week in class room and four hours laboratory practice.* Text-book: Andrew's Botany with Flora. *Required of Agricultural Freshmen the third term.*

Professor BROWN and Mr. BEAL.

2. **Structural and Physiological Botany.**—This course is designed to give a general idea of the gross and microscopical structure of roots, stems, leaves, flowers and fruits of flowering plants, and further, to acquaint the student with some of the physiological processes of plant life. Absorption, transportation, and assimilation of plant food; photosynthesis, respiration, excretion of waste matter; responses of stimuli, etc., are subjects considered. *One term; two hours per week recitation, and four hours laboratory and field practice.* *Required of all Agricultural Sophomores the first term.*

Professor BROWN and Mr. BEAL.

3. **Morphology of the Lower Plants.**—This course deals with representative groups that illustrate the line of evolution of plants. Emphasis is placed on structure and methods of reproduction. *One term; two hours per week recitation, and four hours a week in the laboratory or field.* Text-book: Bergen

& Davis's Principles of Botany. *Required of all Agricultural Sophomores, second term.* Professor BROWN and Mr. BEAL.

5. Plant Diseases.—This course deals with the fungus and bacterial diseases of plants, special emphasis being placed on the diseases of cultivated plants. Specimens of fungi which attack our common plants are examined in the laboratory to familiarize the students with their structural characters, and studies of their life history are made for the purpose of learning how to combat them. Text-book: Stevens and Hall's Diseases of Economic Plants. *One term; two hours per week recitation, and four hours laboratory or field work. Required of all Agricultural Sophomores the third term.* Mr. BEAL.

7. Farm Forestry.—This course is intended to give the student a general idea of the relation of forests to agriculture. The following topics are treated: Influence of forests upon the farm surroundings, and upon the soil bearing them; the farm wood-lot, and how to manage it; collection and planting of forest seeds, and making of forests nurseries; tree planting for timber; importance of the forest industries of the state and nation. *One term; two hours per week in class room and two hours per week in laboratory or field. Required of Agricultural Seniors the first term.* Professor BROWN.

11. Ecology of Plants.—This course is designed to teach the effects of environment upon plant growth. The effects of soil, moisture, heat, altitude, latitude, and plant associations on the form, structure, and usefulness of the individual plant, are studied. The distribution of the various plant societies over the earth's surface as a result of ecological factors, is investigated. *One term; two hours per week recitation, and two hours in field and laboratory. Elective, second term.*

Professor BROWN.

12. Advanced Plant Pathology.—This course deals with the subject of plant diseases as caused by parasitic plants. Fungus and bacterial diseases of plants are investigated in the laboratory and methods for combatting same are studied. Emphasis is placed on the literature dealing with this subject. Bibliographies on selected subjects are prepared from the Experiment Station bulletins, and from the publications of the United States Department of Agriculture. *Two hours per week lectures and recitations, and four hours laboratory or field work. Elective, first term.* Mr. BEAL.

13. **Taxonomy of the Higher Plants.**—A study of the kinds of plants with special reference to their morphology, identification, habitat, and range of species. A study is made of the plants growing in the local flora, and an herbarium prepared. *One hour lecture per week and six hours laboratory or field work. Elective, first or third term.* Professor BROWN.
14. **Dendrology.**—A biological and taxonomic study of trees and shrubs, including laboratory study and field observations upon native and cultivated species. *One hour per week lecture and four hours laboratory and field work. Elective, first or third term.* Professor BROWN.
15. **Plant Physiology.**—In this course the student studies the principal life functions of plants, such as photosynthesis, respiration, transpiration, growth, and the responses of plants to environmental conditions and physical stimuli. *One hour lecture per week, and four hours laboratory work. Elective, second term.* Professor BROWN.
16. **Cytology.**—Study of the vegetable cell, its multiplication and contents; practical application of modern methods in a study of nuclear and cell division; introduction to methods of investigation. *One hour lecture per week and six hours laboratory work. Elective, first term.* Professor BROWN.
17. **Histology.**—A study of the structure and development of the tissues of higher plants. *One hour lecture per week and six hours laboratory work. Elective, second term.* Professor BROWN.
18. **General Botany.**—This course endeavors to give the student a brief survey of the plant kingdom and an outline of the life history of the higher plants from germination to maturity. Stress is laid on floral structure, fruit formation and reproduction. *Second term; four hours per week in class room, and four hours in laboratory. Required of all Pedagogical Freshmen.* Mr. BEAL.
19. **Taxonomy, Morphology and Histology of the Higher Plants.**—(This course corresponds to course 1 and the first part of course 2. The work is somewhat more detailed than the work given in those courses.) *Lectures or recitations, five hours per week and four hours laboratory work; third term. Required of Freshmen in General Science Course.* Professor BROWN.

20. **Physiology and Morphology.**—(This course covers much the same ground as the latter part of course 2, and course 3, but the work is somewhat more detailed. *Lectures or recitations five hours per week and four hours laboratory work; first term. Required of Sophomores in General Science Course.*

Professor BROWN.

21. **Weeds.**—A study of the most important farm and garden weeds occurring in Mississippi with methods of introduction, how to combat them, etc., as well as a study of their seeds so that it will be possible to recognize them when occurring as contaminations in agricultural seed. *One lecture per week, and two hours laboratory work. Elective, second term.*

Professor BROWN.

22. **Agricultural Botany.**—This is a brief course in elementary botany; it is planned to suit the needs of students that have not had the advantage of high school training and expect to engage in farming. *Lectures or recitations three hours per week and two hours field or laboratory work; second term. Required of Freshmen in the two-year course in Agriculture.* Mr. BEAL.

Advanced Work in Botany and Forestry.—In addition to the courses outlined above, work leading to the degree of M. Sc., may be taken in this department. The nature and scope of the work will be arranged by special consultation with the applicant.

CHEMISTRY.

Professor HAND.

Associate Professor SMITH.

Mr. GRAY.

Mr. STEELE.

General Arrangement of Courses.—The courses of undergraduate instruction offered by the Department of Chemistry are arranged, as far as possible, to meet the special requirements of students pursuing work in the several schools.

Those students who choose their major work from the courses given in the School of Agriculture may enter upon

a special study of chemistry by electing courses in agricultural, general analytical, organic, or industrial chemistry.

A lecture and laboratory course in general inorganic chemistry are requirements for a degree taken in any school. Students who have taken special undergraduate work may arrange to continue their study after graduation. The elective courses and opportunities for graduate work will appeal more especially:

(a) To those who wish to enter upon careers as teachers of chemistry, or as analytical chemists.

(b) To students who desire some acquaintance with the principles, methods of work, and applications of the science on account of its especial bearing upon their major studies along other lines, as, for example, in agronomy, dairying, etc.

(c) To those who, after graduation, elect to do here work preliminary to a higher college or university degree, or who wish continued systematic training in chemistry, with the more immediate view of becoming analysts.

OUTLINE OF COURSES.

1. General Inorganic Chemistry.—This course is required of all regular students of the Sophomore class, irrespective of the school under which they may be classified. The work is arranged for those who are just beginning the study of chemistry; but in view of the importance and general use of the principles of elementary physics in presenting the theoretical side, some degree of proficiency in the latter subject is a practical prerequisite. Alexander Smith's "A College Course in Chemistry" is used as a text-book in this course. Such subjects as the theories of solutions, ionization, chemical and physical equilibrium, etc., and their application to the study of chemical phenomena are considered as fully as the time will allow and the maturity of the students permit. *Required of all regular Sophomores; in School of Agriculture, four lectures and recitations per week, for three terms.*

Professor SMITH, Mr. STEELE and Mr. GRAY.

20. General Inorganic Chemistry.—Course for students in School of Engineering and General Science same as course 1, except

as to time allowed for subject. *Five lectures a week for two terms. Required of all Sophomores in School of Engineering and General Science.*

Professor SMITH, Mr. STEELE and Mr. GRAY.

- 21. General Inorganic Chemistry.**—Same as course 1, except as to time given subject. *Three lectures a week for three terms. Required of all Sophomores in School of Industrial Education.*

Professor SMITH, Mr. STEELE and Mr. GRAY.

- 5. A Laboratory Course in General Chemistry.**—Laboratory work to accompany course 1. The course is an elementary training for the beginner in the methods of work and reasoning by which the science has been built up. It is required necessarily of all those who take the lecture course. Much of this experimental work is of a quantitative character. Alexander Smith's "Laboratory Outline of General Chemistry" is used. *Required of all regular Sophomores. In the School of Agriculture, four periods a week for three terms. For all other Sophomores, four periods a week for two terms.*

Professor SMITH, Mr. GRAY and Mr. STEELE.

- 22. A Laboratory Course in General Chemistry.**—A course of laboratory work and study to accompany course 20. Same as course 5 except as to time. *Four hours a week for two terms. Required of Sophomores in School of Engineering and General Science.*

Mr. GRAY and Mr. STEEL.

- 23. A Laboratory Course in General Chemistry.**—To accompany course 21, same as course 5 except as to time. *Four hours a week for three terms. Required of Sophomores in School of Industrial Education.*

Mr. GRAY and Mr. STEELE.

- 2. Organic Chemistry.**—This is a short introductory course for students electing work in the School of Agriculture. The limited time necessitates a restriction of the work most largely to the aliphatic bodies, which are of more immediate importance from the viewpoint of the student of agriculture. The course involves the usual discussion of the source, classification, properties, and important general synthesis of organic compounds. The alcohols, aldehydes, ethers, esters, vegetable acids, vegetable oils, and animal fats, sugars, starch, cellulose, etc., receive careful attention. *Lectures and recitations. Four hours per week, one term. Required of all Juniors in the School of Agriculture.* Professor HAND and Professor SMITH.

***14. Organic Preparations.**—General laboratory practice to accompany the lecture course in organic chemistry includes the usual work for beginners in the subject, as, for example, the determination of melting and boiling points, fractional distillation, and the synthesis and laboratory study of a few types of important classes of organic bodies, etc. Courses 1, 2, and 5, are prerequisites. *Five laboratory periods a week for one term. Required of all Juniors in the School of Agriculture.*
Professor SMITH and Mr. STEELE.

3. Agricultural Chemistry.—The work embraced in this course involves a discussion of the application of the principles of chemistry to agriculture. Courses 1, 2, and 5, are prerequisites. The following subjects, which receive attention in some detail, will give a general idea of the plan and scope of the work undertaken. Composition, classification, properties and formation of the organic compounds of plants, the inorganic parts of plants, composition of the atmosphere and its relation to plant growth, the chemistry and manufacture of commercial fertilizers and farm manures, the function and conservation of humus, general conservation of fertility, involving a study of the chemical composition of soils and general soil chemistry. Lectures and recitations. Reference books: Fraps' Principles of Agricultural Chemistry, Johnson's How Crops Grow and How Crops Feed, Johnson and Cameron's Elements of Agricultural Chemistry, Storer's Agriculture in Some of Its Relations with Chemistry, journals, reports and bulletins of the Experiment Stations and Bureaus of the U. S. Department of Agriculture. *Four hours per week, one term. Required of all Juniors in School of Agriculture.*
Professor HAND.

4. Agricultural Analysis.—This course in analytical work supplements the instruction in agricultural chemistry, and the two courses are pursued at the same time. It is introduced by a short course in qualitative analysis. The work is practically confined to the analysis of soils, fertilizers. Lectures, recitations, and laboratory work. Courses 1, 2, 5, and 11 or 14 are prerequisites. *Five hours, one term. Required of all Juniors in School of Agriculture.*

Professor SMITH and Mr. STEELE.

* Course 11 may be substituted for Course 14 in the discretion of the instructor.

6. **Agricultural Analysis.**—A continuation of course 4. Involves an additional and more careful study of the foundations of analytical chemistry, and of special methods as applied to examination of soils, fertilizers, and agricultural products. Students taking their major work in agronomy may confine their studies more especially to soil chemistry, while those taking special courses in dairying may devote this time to dairy chemistry and the general examination of dairy products. *Lectures, three hours a week, and laboratory work, at least ten hours a week, one term, Senior year. Elective for Seniors in School of Agriculture.*

Professor HAND and Professor SMITH.

17. **Organic Chemistry.**—A course in General Organic Chemistry including aliphatic and carbocyclic compounds. The course is intended primarily for students in the School of General Science electing courses in chemistry. The course includes discussions of the general principles of organic chemistry. Perkins & Kipping's Organic Chemistry is recommended for use in connection with the lectures. *Five lectures a week for two terms. Elective for students in the School of General Science. May be elected also by students in the School of Agriculture.*

Professor HAND.

9. **Organic Preparations.**—A laboratory study of organic chemistry, involving practice in the determination of molecular weights by freezing-point, boiling-point, and vapor density methods, the analysis of organic compounds and preparation of pure organic bodies. This course is taken in connection with lecture course 17. Gattermann's *die Praxis des Organischen Chemikers* is used as a laboratory manual. Levy-Bistrzychi's *Organische Prepare*, Coen's Organic Chemistry for advanced students, and other well known manuals are available. *Eight hours laboratory work a week for two terms. Elective for students in the Schools of General Science and Agriculture.*

Professor SMITH.

7. **Industrial Chemistry.**—A general discussion of the chemistry of industrial products, including liquid, solid, and gaseous fuels, water for industrial purposes, oils, cast irons, copper, zinc, lead, steel, cement, lime, ceramics, glass, oils and fats, soap, glycerine, explosives, etc. *Five lectures a week for two terms. Required of Seniors in School of Engineering. Elective for students in the School of Agriculture.*

Professor HAND or Professor SMITH.

11. **Qualitative Analysis.**—A lecture and laboratory course dealing with the separation and identification of the more common anions and cations, treated in connection with elementary discussions of theories of solutions, ionization, chemical and physical equilibrium, etc. *Elective for students in Schools of Agriculture and Engineering. Required of Sophomores in course in Civil Engineering. Two lectures and six hours laboratory work, one term.*

Professor SMITH and Mr. GRAY.

19. **Qualitative Analysis.**—A systematic study of the principles of qualitative analysis, involving osmotic pressure and the theory of reduction, ionization, electrical conductivity, the equilibrium laws, complex ions, oxidation, etc. Qualitative Analysis, volumes I and II, by Julius Stieglitz, is used as a text. *Five lectures and nine laboratory hours a week for two terms. Elective for students in the School of General Science.*

Professor HAND and Professor SMITH.

13. **Engineering Chemistry.**—A course in quantitative work dealing with the testing and examination of materials of more immediate importance from the engineering point of view, as, for example, proximate analysis and calorific value of coal and coke, liquid fuels and general calorimetry, analysis of flue gases, water for generation of steam, boiler scale, cast iron, special steels, lubricating oils, cylinder deposits, alloys, cement, fire clay, soap, building stones, ores and slags. Special topics of particular interest to students may be selected. The course is introduced by practice in the preparation and analysis of a few pure salts. Courses 1 and 5, prerequisite. *Five lectures and nine laboratory hours per week, first and second terms. Required of Seniors in Mechanical Engineering course.*

Professor HAND.

10. **Analytical Chemistry.**—A study of the methods, theories, and calculations of analytical chemistry, with lectures and references upon topics of physical chemistry. Discussions of the desirability of methods in special analytical work. Accurate determinations of specific gravity. Molecular weight determinations by boiling-point, freezing-point, and vapor density methods. Calibration of volumetric instruments. Preparation of accurately standardized solutions of acids and alkalies, and of volumetric solutions in general. Laboratory practice in graded exercises in quantitative separations and estimations. *Lectures, recitations and laboratory work.*

Lectures, five hours per week for one term, and three hours per week for two terms. Laboratory work not less than ten hours per week. Elective for students in General Science course, and for Seniors in School of Agriculture. Courses 1, 5, and 11 or 15 are prerequisites.

Professor HAND and Professor SMITH.

- 18. Elementary Agricultural Chemistry.**—A very elementary introduction to general chemistry followed by a discussion of the chemistry of plant and animal life, feeding stuffs, fertilizers, and soils. *Four lectures and four laboratory periods, first term, second year in the Short Course in Agriculture.*

Professor HAND.

Summer Courses.—While no regular summer courses in chemistry have been established by the faculty, the laboratories are open throughout the year, and the students who may wish to extend their regular course, or to do special work during the vacation, are allowed to do so at no extra expense. Students looking forward to careers as physicians or pharmacists, or who wish to prepare themselves for business in which a knowledge of chemistry is important, may find it desirable to take advantage of the facilities offered by the department.

Advanced Work in Chemistry.—In addition to the undergraduate course of instruction outlined above, the Department of Chemistry offers also to graduate students courses in analytical, agricultural, and organic chemistry, as major and minor for the M. Sc. degree. The general nature and scope of the work is arranged by special agreement. The work is designed mainly for two classes of students:

(1) Those who wish to enter as soon as possible upon professional university courses with a view to becoming candidates for the higher degrees. The advantages which the department can offer for this preparatory work are desirable.

(2) Those who wish to secure accurate training in analytical chemistry with the immediate view of securing positions as analytical chemists.

No time limit is set for the completion of the requirements, though two years of laboratory practice are usually necessary.

Library.—The library of the Department of Chemistry contains complete sets of the *Annalen der Chemie*, *Berichte d. deutsch. Chem. Gesellschaft*, *Jr. für prak. Chemie*, *Zeit. f. Anal. Chemie*, *Journal of the Chemical Society*, *Journal of the Society of Chemical Industry*, *American Chemical Journal*, *Journals of the Am. Chem. Society*, *Experiment Station Record*, *Jr. physikalische Chemie*, *Jr. Allgemeinen Chemie*, and *Chemische Centralblatt*. The more important chemical journals are regularly received. The library contains also hand books and dictionaries of inorganic, organic, and industrial chemistry, and a large number of reference and text books relating to the various branches of pure and applied chemistry.

CIVIL ENGINEERING AND DRAWING.

Professor GAY.

Associate Professor FREEMAN.

Mr. ROBERTSON.

CIVIL ENGINEERING.

21. **Plane Surveying.**—This course is designed to provide instruction in the ordinary methods of land and engineering surveying. The subjects treated are, description and adjustment of surveying and engineering field instruments, field methods of land surveying, determination of error of closure, balancing the surveys, computation of areas and plotting from field notes, differential and profile leveling, heights and distances by stadia measurements, determination of the true meridian by the pole star, and solar methods, and thence the magnetic

declination. Prerequisite, Trigonometry. Text-book: Tracy's Plane Surveying. *Five hours per week, first term. Required of Civil Engineering Juniors.*

Professor GAY and Mr. ROBERTSON.

22. **Surveying Field Work.**—This course accompanies the course in Plane Surveying, and gives abundant practice in the various field operations, and in plotting. *Nine hours per week, first term. Required of Civil Engineering Juniors.*

Professor GAY and Mr. ROBERTSON.

23. **Railroad Surveying.**—This course is designed to give a training in the field methods of railroad surveying, together with the usual office work of computation and plotting. The subjects covered include a discussion of the various kinds of railroad surveys and their purposes, alignment, earthwork, computation, etc. Text-book: Allen's Railroad Curves. *Five hours per week, second term. Required of Civil Engineering Juniors.*

Mr. ROBERTSON.

24. **Railroad Field Work.**—This course supplements that of Railroad Surveying. Each class is required to make a survey and the necessary maps for a short line of railroad. *Nine hours per week, third term. Required of Civil Engineering Juniors.*

Professor GAY and Mr. ROBERTSON.

25. **Mapping.**—Practical work in the plotting of land and topographic surveys. *Nine hours per week, second term. Required of Civil Engineering Juniors.*

Professor GAY and Mr. ROBERTSON.

27. **Highway Engineering.**—This course is designed to give a thorough knowledge of the construction and maintenance of earth and stone roads, and the various street pavements. Special stress will be laid on the subject of construction and drainage of earth roads, this phase of the subject being taught as much as possible from the knowledge gained by actual experiments in Mississippi and other states. Text-book: Spalding's Roads and Pavements. *Required of Civil Engineering Juniors. Four hours per week, third term.*

Professor GAY.

- 28 and 28a. **Strength of Materials.**—A study of the strength and elastic properties of the various materials used in engineering construction. The theory of the strength and behavior, under load, of beams, columns, shafts, pipe, riveted joints,

etc. Text-book: Boyd's Strength of Materials. *Five hours per week, first term; three hours per week, second term. Required of all Civil Engineering Seniors.* Professor GAY.

30. **Field Work.**—This course supplements course 22, and gives added proficiency in the handling of surveying instruments as well as practice in solar observation for determination of meridian. *Five hours per week, first term. Required of all Civil Engineering Seniors.*

Professor GAY and Mr. ROBERTSON.

31. **Roofs and Bridges.**—In the class room the more common forms of roof and bridge trusses are studied and complete analyses of stresses due to truss weight and applied loads are worked out, analytical methods of solution being employed. Text-book: Merriman's Roofs and Bridges, Part I. *Five hours per week, third term. Required of all Civil Engineering Seniors.*

Professor GAY.

57. **Graphic Statics.**—A course in the principles underlying graphic solution of bridge stresses. Text-book: ————. *Two hours per week, second term. Required of Civil Engineering Seniors.*

Professor GAY.

32. **Graphics.**—A course of drafting accompanying and illustrating the course in Graphic Statics. *Six hours per week, second term. Required of Civil Engineering Seniors.*

Professor GAY.

34. **Advanced Graphics.**—A continuation of the course in Graphics. *Six hours per week, third term. Required of Civil Engineering Seniors.*

Professor GAY.

19. **Drainage Engineering.**—The object of this course is to give the student a knowledge of the fundamentals of drainage work for land reclamation, and of the laws of hydraulics underlying such work. Text-books: Merriman's Elements of Hydraulics, and Elliott's Engineering for Land Drainage. *Five hours per week, third term. Required of Civil Engineering Seniors.*

Professor GAY.

35. **Surveying.**—A condensed course intended to cover the general principles of engineering surveying. Text-book: Merriman & Brooks' Handbook for Surveyors. *Two hours per week, first term. Required of Mechanical and Electrical Seniors.*

Mr. ROBERTSON.

36. **Field Work.**—A course of practice in the handling of surveying instruments. To accompany the course in Surveying. *Three hours per week, first term. Required of Mechanical and Electrical Seniors.* Mr. ROBERTSON.
38. **Civil Engineering.**—A course designed for Electrical Engineering students, and covering the discussion of some phases of Civil Engineering with which they will come in contact; such as hydrography, including rain-fall and run-off, the location of hydro-electric works, etc. Text-book: Mead's Water Power Engineering. *Five hours per week, third term. Required of Electrical Seniors.* Professor GAY.
59. **Mechanics.**—A course in Elementary Mechanics covering in a brief way the composition and resolution of forces, the moment theorem, friction, work, power, energy, center of gravity, moment of inertia, and such allied subjects as time will permit. Text-book: To be announced. *Four hours weekly, third term. Required of Civil Engineering Juniors.* Professor GAY.
60. **Practical Astronomy.**—A course sufficiently broad to cover those astronomical essentials underlying the determination of meridian, latitude, and time, as ordinarily required of practicing engineers. Text-book: Hosmer's Textbook on Practical Astronomy. *Two hours weekly, first term. Required of Civil Engineering Seniors.* Professor GAY.
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DRAWING.

40. **Free-Hand Drawing.**—This is an elementary course, having as its objects the training of the eye to see correctly and to observe closely, and of the hand in easy and precise manipulation. The work consists in drawing straight lines and curves, outlines of objects from the blackboard, object drawing in outline, and perspection and shading. *Four hours per week, first term. Required of all Freshmen.* Associate Professor FREEMAN.
41. **Mechanical Sketching.**—A continuation of course 40, special practice being afforded in sketching mechanical details and in free-hand lettering. Text-book: French's Engineering Drawing. *Six hours per week, second term. Required of Engineering and Textile Freshmen.* Associate Professor FREEMAN.

43. Mechanical Drawing.—Use of drawing instruments, geometrical constructions, projections of parts of machines, standard bolts, etc., free-hand lettering. Text-book: French's Engineering Drawing. *Six hours per week, third term. Required of Engineering and Textile Freshmen.*

Associate Professor FREEMAN.

45. Mechanical Sketching.—Free-hand lettering; sketching from machine parts. Working drawings of models to be made in manual training course in wood-work. *Four hours per week, second term. Required of General Science and Industrial Pedagogy Freshmen.*

Associate Professor FREEMAN and Mr. ROBERTSON.

46. Mechanical Drawing.—Same as course 43, except for time. *Four hours per week, third term. Required of General Science and Industrial Pedagogy Freshmen.*

Associate Professor FREEMAN and Mr. ROBERTSON.

47. Mechanical Sketching.—Same as course 41, except for time. *Two hours per week, second term. Required of Agricultural Freshmen.*

Mr. ROBERTSON.

48-49-50. Projection Drawing.—Elementary instruction in descriptive geometry and projection drawing, with especial consideration of the needs of mechanical draftsmen. The course is intended to give thorough training in those portions of the subject which constitute the foundation of drawing. Text-book: French's Engineering Drawing. *Four hours per week, three terms. Required of Engineering Sophomores.*

Associate Professor FREEMAN.

Students' Drawing Outfit.—All engineering students are advised to provide themselves with the following drawing instruments and materials:

- 1 Nine-piece set of Drawing Instruments in case.
- 1 Pearwood T-square, 18".
- 1 Pair Celluloid Triangles—6"-45°; 8"-30° x 60°.
- 1 12" Boxwood Scale; Triangular Boxwood Scale.
- 1 Irregular Celluloid Curve.
- 1 5" Celluloid Protractor.
- 1 Koh-i-Noor Pencil, 4H.
- 1 Penholder and half dozen Assorted Pens.
- 1 3-4 oz. Bottle Black Drawing Ink.
- 1 Towers' "Multiplex" Eraser, 1-20 lb.
- 1 Tack Lifter and File.
- 1 Drawing Board, of size specified.

Equipment.—The Department of Civil Engineering is well equipped for all kinds of field work; the instrumental outfit consisting of 7 engineer's transits, 2 solar attachments, 1 plain engineer's transit, 1 light mountain and mining transit, 1 theodolite, 7 wye levels, 1 dumpy level, 1 builder's level, 4 hand levels, 2 vernier compasses, 1 pocket compass, 1 plane table, 1 stadia rod, leveling rods, range poles, chains, tapes, etc.

The two drawing rooms are large and well lighted, and furnished with suitable desks and secure lockers. Each student is furnished with a locker in which his drawing instruments may be left with perfect safety. The instructor's desk is supplied with a great variety of drawing instruments, not included in the student's outfit, and these are for students' use, as occasion may demand. A modern and complete blue-printing outfit forms a part of the equipment.

Library.—The department library contains many standard works along all lines included in the courses of instruction outlined above, and this collection is constantly being added to. These books are for students' use for reference at all times.

CIVIL GOVERNMENT.

See History and Civics.

CLINICS.

See Veterinary Science.

COTTON GRADING.

A course of instruction in grading cotton is provided and is intended to give the student a practical working knowledge of this business.

In addition to working with the United States standard samples and handling cotton in the actual bales, there will

also be the opportunity, in connection with our textile mill, of learning grading from the spinner's view point.

This course will be thorough and practical and will have advantages in means of instruction that are available at very few schools.

DAIRY HUSBANDRY.

Professor MOORE.

It is the purpose of this department to give such instruction to the students taking the courses offered as will be most helpful in preparing them for their life-work. Instruction is given by the use of systematic lectures suitable text-books, and apt experiments. Practical work is given in the farm dairy, in the creamery, and in the dairy barns.

2. **Milk and Its Products.**—This course deals with the composition of milk, butter, and cheese; the use of the Babcock test; the different methods of handling milk; methods of creaming; the proper conditions for ripening and churning cream; and the making of butter. *Three hours a week recitation and two hours a week practical, first term. Required of Agricultural Sophomores.*
4. **Testing Milk and Its Products.**—Methods of testing milk, cream, butter, cheese, and ice cream; methods of detecting adulterations of milk; fermentation tests; determination of acidity in milk; and methods of pasteurization and sterilization. *Four hours a week recitation and four hours a week practical, second term. Required of Special Dairy Seniors.*
5. **Milk Production.**—A study of individual animals showing the relation of the cow and the herd to the profits derived from milk production; the requirements necessary for the establishment and maintenance of a dairy herd of the highest efficiency. A comparison of different rations for economical milk production; the influence of home grown feeds on the economy of the ration; organization of a dairy farm and a study of the production and disposal of the milk at the greatest profit. *Four hours a week recitation, and four hours a week practical, second term. Required of Agricultural Juniors.*

- 6. Butter and Cheese Making.**—Principles and practice of creamery butter-making, pasteurization of cream for butter-making; propagation of starters; cream ripening; churning, washing, salting, working, packing, and marketing butter; defects of butter; moisture tests; composition and score of butter; calculation of over-run. The latter part of the term will be devoted to the manufacture of cheese; practice in ripening and setting the milk; cooking, cheddaring, milling, and salting the curds; and pressing, curing, and scoring the cheese. *Three hours a week recitation, and six hours a week practical, second term. Required of Special Dairy Seniors.*
- 7. Advanced Dairying.**—Methods of handling milk and cream for consumption, standardizing, modifying, and bottling. Ice cream making. Federal and state laws and milk inspection. The study of climate, soils, and market conditions on the development of special lines in dairying. A study of experiment station literature. Prerequisites: Dairy Husbandry 2, 4, and 5. *Three hours a week recitation and six hours a week practical, third term. Required of Special Dairy Seniors.*
- 9. Practical Dairying.**—This course is arranged to give the student practical training in the special line or lines of work in which he desires to become proficient. Lectures and assigned reading will be given in addition to the laboratory work. Tests of the student's progress will be given from time to time as necessity may require. Hours and credits will be arranged. *Not less than five course hours for one term, third term. Required of Special Dairy Seniors.*
- 10. Dairy Farming.**—A very practical course on the feed, care, selection, and management of the dairy cow. Keeping suitable records, making the Babcock test; raising calves for the dairy. *Three hours a week recitation and two hours a week practical, third term. Required of first year students taking the Short Course in Agriculture.*
- 11. Farm Butter-Making.**—The care and handling of milk on the farm; different methods of separation; the ripening of cream, the making of butter. *Three hours a week theory, and two hours a week practical, second term. Required of second year students taking the Short Course in Agriculture.*

Graduate Course.—In addition to the undergraduate course of instruction, outlined above, the Dairy Department offers to graduate students of this and other colleges

opportunities for professional training and original investigation. The special line of study will be left largely to the selection of the student, subject to the approval of the faculty. Such students will take part in the experiments in progress, and after sufficient experience, will conduct independent investigations. For the completion of this course the student will be required to pursue a course of study, approved by a committee of the faculty, equivalent to the work of one year of graduate study.

Equipment.—The new dairy building and dairy barn are models of their kind, and will compare favorably with such buildings found anywhere in the South. The dairy building is equipped with the most modern and improved machinery necessary for successful dairy and creamery work, including the leading makes of testers, separators, churns, butter workers, pasteurizers, and other machinery.

In the barn we have representatives of the Jersey, Holstein-Friesian, Ayrshire, and Red Poll breeds of cattle. There are also about seventy-five head of grade cows that are used to illustrate the theories taught in the class-room regarding the selection, breeding, feeding, and handling of dairy animals.

DRAINING AND TERRACING.

See Agricultural Engineering.

DRAWING.

See Civil Engineering and Drawing.

ELECTRICAL ENGINEERING.

*Professor REID.

Mr. BETHEA.

The object of the course in Electrical Engineering is to give such training as shall enable the graduate to deal intelligently with electrical problems likely to be presented

*Succeeded by Prof. L. L. Patterson.

to the practical engineer, and to enter successfully into practical work in those branches of engineering in which electricity plays the principal part. With this in view, principles rather than details are emphasized, and these principles are developed and fixed by the free use of concrete problems, as well as by laboratory experiments and tests.

In common with the other engineering courses, the first years are largely devoted to the study of physical science and mathematics, and the attempt is made to familiarize the student with both the analytical and graphical methods of treating physical problems. The purely electrical work extends through the third and fourth years, that of the third year being devoted to the more elementary theory and to the practice of the simpler tests and measurements in direct current machinery, while the study of the fourth year is largely directed toward alternating currents and alternating current machinery and the more complicated tests of the alternating current and dynamo laboratory.

Electrical methods are being adopted in a constantly enlarging field, and this is steadily increasing the demand for graduates of technical courses. To the earlier use of electricity for lighting, have been added its use for power in a very great variety of industries. The driving of machine shops by electricity, although it has become the standard method and is being installed in all new shops of importance, has yet a wide field for development. It furnishes an ideal course of power in the textile industries, of such great importance in the economic development of our state.

Electric railroading has already become one of the most important industries in which electricity is involved, and with substitution of electricity upon steam roads which is now begun, this application of electric power will grow very rapidly. In the telephone industry, both the manufacturing and operating companies are calling for technical

graduates in ever larger numbers, and the engineering departments of this industry offer a most interesting profession.

To the electrical engineering graduates are opened several different lines of work. The electrical manufacturers have long required many men for their engineering, commercial and manufacturing departments; there are also positions with construction and commercial companies, and more recently larger demand is coming for men from the companies operating lighting and power plants.

The courses given in this department are as follows:

1. **Electricity and Magnetism.**—This course follows the Electricity and Magnetism of the Sophomore year, but instruction is given more in detail, and with particular reference to the needs of the student in Electrical Engineering. It comprises a study of the theory of magnetism, a study of electro-magnets and the magnetism of iron as applied to dynamo-electric machinery, and a preliminary study of the dynamo, its parts and construction, and the principles underlying the construction and operation of dynamos. *Lectures and recitations, five hours a week for one term, laboratory practice three hours per week for one term. Required of Electrical Engineering Juniors. Lectures and recitations, Professor REID; laboratory practice, Professor REID and Mr. BETHEA.*
2. **Dynamo Electric Machinery.**—This course comprises a study of the theory and operation of direct-current dynamos as generators and motors, including series, shunt and compound wound machines, the theory of commutation, parallel operation, speed control of motors, power losses in generators and motors, efficiencies, characteristic curves, **together** with a discussion of the principles of generator and motor testing. *Lectures and recitations, five hours a week for one term; laboratory practice, three hours a week for one term. Required of Electrical Engineering Juniors. Lectures and recitations, Professor REID. Laboratory practice, Professor REID and Mr. BETHEA.*
3. **Electrical Engineering.**—A study of the applications of direct currents for the distribution of power, including a study of distribution systems of wiring, and regulating apparatus,

storage batteries, and an elementary study of the principles of photometry and electric lighting. *Lectures and recitations, five hours a week for one term; laboratory practice, three hours a week for one term. Required of Electrical Engineering Juniors. Lectures and recitations, Professor REID. Laboratory practice, Professor REID and Mr. BETHEA.*

5. **Alternating Currents.**—This course includes a study, by both graphical and analytical methods, of the theory of alternating currents; it includes the sine wave and its applications to electric circuits, other wave forms and the quantities which affect wave forms; a study of the various types of alternating current circuits containing impedances in series and parallel combinations; the measurement of power in single and poly-phase circuits, and the theory, operation, efficiency, and applications of the transformer. *Lectures and recitations, five hours a week for one term; laboratory practice, six hours a week for one term. Required of Electrical Engineering Seniors. Lectures and recitations, Professor REID. Laboratory practice, Professor REID and Mr. BETHEA.*
6. **Alternating Current Generators and Motors.**—A study of the theory, construction, and operation of all types of alternating current generators, of induction and synchronous motors, of alternating current regulators, rotary converters and applications, and of the newer types of repulsion and series alternating current motors. As experimental work in the laboratory is concurrent with this course, it also includes a discussion of the methods of testing alternating current apparatus. *Lectures and recitations, five hours a week for one term; laboratory practice, six hours a week for one term. Required of Electrical Engineering Seniors. Lectures and recitations, Professor REID. Laboratory practice, Professor REID and Mr. BETHEA.*
7. **Power Generation, Transmission and Distribution.**—This course comprises a study of generating apparatus in lighting and power plants, a study of station equipment, switch-boards and appliances, lighting protection and line construction. Technical articles in the engineering periodicals are largely used as reference texts in this course, and each student is assigned several topics during the term along the lines suggested above, and required to submit abstracts of articles on these topics before the class. *Lectures and recitations, five hours a week for one term; laboratory practice, six hours a*

week for one term. Required of Electrical Engineering Seniors. Lectures and recitations, Professor REID. Laboratory practice, Professor REID and Mr. BETHEA.

8. Direct Current Machinery.—The work of the Sophomore year in fundamental electrical and magnetic laws is first reviewed and extended to their application to the various types of direct current machinery and auxiliary apparatus. A study is then made of the details of construction, efficiency of operation and practical applications of constant potential and constant current generators, compound, shunt and series motors, and controlling apparatus. The study of a text-book is supplemented by numerous practical problems. *Lectures and recitations, five hours a week for one and one-half terms: laboratory practice, three hours a week for one and a half terms. Required of Mechanical Engineering Juniors. Mr. BETHEA.*

9. Alternating Current Machinery.—This is a practical course in the theory and application of alternating currents, designed for those not specializing in Electrical Engineering, but whose future work will of necessity bring them into greater or less contact with electrical power and appliances. A brief study is first made of the application of the sine wave to alternating currents and circuits containing resistance, inductance and capacity in series and in multiple. A study is then made of the construction, principles of operation, and behavior of single and polyphase generators and motors, the transformer, the induction motor, the synchronous motor, and their application and adaptability to the shop, the factory and the textile mill. *Lectures and recitations, five hours a week for one and a half terms: laboratory practice, three hours a week for one and a half terms. Required of Mechanical Engineering Juniors. Mr. BETHEA.*

10. Electrical Practice.—A series of lectures on and demonstrations of the operation and care of dynamos and motors, intended to give the student who may be called upon to use electrical apparatus as instructor in manual training, a working knowledge of such apparatus. Lectures are also given on the proper use of modern electrical illuminants. *One hour per week during second term. Required of Pedagogical Juniors.*

Professor REID and Mr. BETHEA.

Equipment.—The department has excellent facilities for practical_experimental work. The apparatus includes

48 generators and motors of various makes and sizes from 40 horse power down, among them 110 volt and 220 volt direct and alternating current generators, series, shunt and compound wound, single, two or three phase motors, and more than 100 indicating ammeters, voltmeters, and wattmeters of the best types of American and foreign manufacture.

Some of the more important pieces of apparatus are a 4-unit set, consisting of two 7.5 KW. generators, capable of being connected for single, two, three, four or six-phase currents, whose rotating fields may be direct-connected and the position of whose armatures may be moved to give any desired angle of phase difference between their currents; each generator is direct-connected to a 15 HP. variable speed motor, both inter-pole, one of variable air-gap type, speed range 3 to 1, the other of variable field type, speed range the same; the entire set being mounted on a single bed-plate; a Special University Alternator, capable of being used as a generator, synchronous motor or induction motor for single, two or three phase currents, direct connected to a 220 volt, variable speed motor of wide range; a special revolving field, three phase, 2300 volt, 60 cycle generator, direct connected to 220 volt motor, all complete, with switch-board containing ammeters, voltmeters, instrument transformers, wattmeters, ground detectors, and synchronizing apparatus, the whole serving as an illustration of a modern power plant installation, as well as being available for tests; a 150,000 volt special testing transformer; a 10,000 volt testing transformer; a mercury arc rectifier set complete; a resistance-in-armature type, variable speed induction motor; a direct connected set, consisting of two 6 KW. each, compound wound 125 volt dynamos, used as a balancer set on 220 volt mains to give 110 volts for laboratory use; a smaller set of 3 KW. capacity for studying the operation of shunt and compound generators in parallel, two generators on a three-wire sys-

tem, efficiency tests by opposition methods, and various other purposes; a special rotary convertor for single, two or three phase use; transformers to change from two to three phase; auto-transformers from which a wide range of voltage may be obtained; a series arc generator with regulating device; alternating series arc regulators; a three-meter photometer bar, with modern photometer and motor-driven lamp holder; a 20 KW. two phase generator, arranged for compounding, direct connected to a 30 HP. motor; two similar compound generators, arranged for parallel operation; 15 transformers of various makes up to 10 KW. capacity, induction motors, single, two and three phase, and many other machines and pieces of apparatus of ordinary characteristics. A vibrating reed frequency meter, tachometer and speed counters, lamp banks, water rheostats, and many other inductive and non-inductive resistance units are provided as auxiliary apparatus in testing the above mentioned machinery.

A complete standardizing outfit, consisting of standard potentiometer, standard cell, and standards of resistance, certified by the Physikalisch-Technische Reichsanstalt and by the National Bureau of Standards, is available for keeping the instruments of the laboratory in calibration, and has proved of service in checking instruments throughout the state. A 66 cell storage battery of 80 ampere-hour capacity with a few cells of heavier current, furnish steady conditions for instrument testing.

Standard ammeters and voltmeters for direct and alternating currents, a Kelvin balance, watthour meter calibrator, oscillograph, 18-inch induction coil, two complete sets of wireless telegraph apparatus, and X-ray apparatus are other special pieces.

The college power plant, containing three direct connected, engine driven units (one 75 KW. 2300 volt, 60

cycle, three-phase generator, with a modern well equipped switch-board, one 75 KW. 220 volt compound-wound direct current generator, and another of similar type of 40 KW. capacity, with switch-boards for their control), a 7.5 KW. high speed, turbine driven unit, and also some 34 motors, aggregating 218 horse-power, used in the various departments of the college, are maintained by students of this department, and are at all times available for instruction. In addition, all extensions and repairs on the distribution system, and the wiring systems in all new buildings are installed by students, who are paid for their labor, under the supervision of the department.

The lecture room is equipped with special alternating current apparatus, particularly for demonstrating phenomena of induction, and is lighted by carbon and flaming arc, Nernst, mercury vapor, carbon, and metallic filament incandescent lamps, many types of each being represented, and so arranged on separate circuits that the room may in turn be lighted by each means. A complete line of cooking utensils and other household appliances are provided as an object lesson as a means of business getting for students who may enter the central station field.

Telephone Equipment.—Through the kindness of the Cumberland Telephone & Telegraph Company, the department is able to place before the students modern apparatus of a local energy telephone system, including the central switch-board, and although no course has been scheduled, each year several interested students on request have received regular instruction in the fundamental principles of telephone circuits and systems.

ETHICS.

See Industrial Education.

ENGLISH.

Professor WEDDELL.

Associate Professor MELLEN.

Assistant Professor TOWLES.

Mr. SHANNON.

*Mr. PATE.

*Mr. BUTTS.

The object of this department is to give the student a practical knowledge of English composition and of literature. The two purposes, utility and culture, are constantly kept in view, and the effort has been so to correlate the courses offered as to meet the needs of the students for training in direct, accurate, and vigorous expression, and for a wider acquaintance with the best literature of our language.

The following courses are offered for the session of 1914-1915:

1. Advanced Rhetoric.—The first three or four weeks are devoted to a brief review of English grammar. Then the four standard forms of discourse (narration, description, exposition, and argumentation) are theoretically discussed, and practice work in each form is presented before the class. Every student is required to write numerous short themes and one long theme on assigned subjects each term. When practicable, conferences are held with deficient students during the entire session. Assigned readings of classics constitute a part of the work of this course. Reports on the books read are submitted. *Five hours a week, three terms. Required of all regular Freshmen of the Engineering, the Industrial Education, and the General Science School; offered to all students prepared to take the work.*

Assistant Professor TOWLES, Mr. PATE, and Mr. BUTTS.

2. Advanced Rhetoric.—This course is similar to English 1, but is less comprehensive. Several classics are assigned for reading out of class. *Three hours a week, three terms. Required of all Agricultural Freshmen; offered to all Agricultural students prepared to take the work.*

Assistant Professor TOWLES, Mr. PATE, and Mr. BUTTS.

*On leave of absence.

- 2. Argumentation and Debate.**—This course offers somewhat advanced work in argument. It considers the selection and the statement of the question; provides practice in gathering materials and in developing the brief; discusses the conduct of debate,—the introduction, the burden of proof, the constructive and deductive forms, and the order of argument. It requires one well developed manuscript and provides as thorough instruction as time may allow. *Five hours a week, the first term. Required of all Engineering, Industrial Education, and General Science Sophomores; offered to all students prepared to do the work.*

Associate Professor MELLEN and Mr. SHANNON.

- 10. Argumentation and Debate.**—This course is somewhat parallel to English 2. It has the same general features, but, being an abridgement, omits some details essential to thoroughness. *Three hours a week, the first term. Required of all Agricultural Sophomores; offered to all Agricultural students prepared to do the work.*

Associate Professor MELLEN and Mr. SHANNON.

- 11. Exposition.**—This course is designed as a continuation both of English 8 and of English 10, in which expository writing was given brief consideration. It is designed especially for Agricultural students. *Three hours a week, the second term. Required of all Agricultural Sophomores; offered to all Agricultural students prepared to do the work.*

Associate Professor MELLEN and Mr. SHANNON.

- 12. American Authors.**—The purpose of this course is to give a general understanding of the chief literary movements in American literature, as manifested by Franklin, Emerson, Whitman, Lanier, and others. Especial attention is given to important Southern writers. A critical essay is required, and library reading is assigned. *Five hours a week, the second term. Required of all Engineering, Industrial Education, and General Science Sophomores; offered to all students prepared to do the work.*

Associate Professor MELLEN and Mr. SHANNON.

- 13. British Authors.**—The aim of this course is to acquaint the student with those great English authors who represent important literary movements. Among those studied are Shakespeare, Milton, Pope, and Wordsworth. Every student submits one critical essay, based on readings assigned by the

instructor. *Five hours a week, the third term. Required of all Engineering, Industrial Education, and General Science Sophomores; offered to all students prepared to do the work.*

Associate Professor MELLEN and Mr. SHANNON.

14. **Epochal British Authors.**—This course is a condensation of English 13 and therefore is not so comprehensive. It considers a few important writers typical of great literary movements. Each student submits a term essay. *Three hours a week, the third term. Required of all Agricultural Sophomores; offered to all Agricultural students prepared to do the work.*

Associate Professor MELLEN and Mr. SHANNON.

5. **Literary Criticism.**—This study takes up the nomenclature of literary art, and the principles of literary criticism as announced by the recognized critics of modern times. Written reviews of the books assigned for reading constitute a part of the practice work of the course. *Five hours a week, the first term. Required of all Juniors of the Engineering and Industrial Education schools; offered to all students prepared to take the work.*

Professor WEDDELL.

9. **Shakespeare.**—This course includes a brief review of the Elizabethan drama, some account of Shakespeare as a man and as a playwright, and a critical reading in class of three representative plays. Additional dramas are assigned for reading out of class. Written reports on these are required. *Five hours a week, the second term. Required of all Juniors of the Engineering and Industrial Education schools; offered to all students prepared to take the work.*

Professor WEDDELL.

15. **Technical Writing.**—This is a purely practice course, and is designed to give the advanced Engineering students some training in the preparation of such papers as will be required of them when they go out in life; such as, business letters, reports, articles for publication, and the like. Numerous short papers and some long ones are required. *Five hours a week, the third term. Required of all Engineering Juniors; offered to all Engineering students prepared to take the work.*

Professor WEDDELL and Assistant Professor TOWLES.

16. **The Short Story and the Modern Novel.**—The first half of the term is devoted to the study of the short-story as a distinct form of literary art. The history of short-story writing, with some account of representative writers, is treated by lectures;

specimens by masters of the art are studied in class. The latter half of the term is devoted to the reading of works by leading modern novelists, especial attention being given to types. *Five hours a week, the third term. Required of all Industrial Education Juniors; offered to all students prepared to take the work.*

Professor WEDDELL.

17. **English Romantic Poetry.**—The rise and development of the romantic movement in English poetry are reviewed by lectures as introductory to the study of the poetry itself. The students read in class complete poems by Wordsworth, Coleridge, Shelley, and Keats. Written reports on other readings are submitted. *Two hours a week, the first term. Required of all Industrial Education Seniors; offered to all students prepared to take the work.*

Professor WEDDELL.

18. **The English Essay.**—The object of this course is to familiarize the student with choice specimens of work by the great essayists of England and America. Selected essays from Bacon, Addison, Lamb, DeQuincey, Carlyle, Ruskin, Arnold, Emerson, and others are studied in class. Each student submits themes on subjects connected with the work. *Two hours a week, the second term. Required of all Industrial Education Seniors; offered to all students prepared to take the work.*

Professor WEDDELL.

19. **The Teaching of English.**—This course is designed for those students of the School of Industrial Education who expect to become teachers in the public schools. Especial attention is given to the teaching of English grammar and composition. *Two hours a week, the third term. Required of Industrial Education Seniors.*

Professor WEDDELL.

FORGE WORK.

See Mechanical Engineering.

FOUNDRY WORK.

See Mechanical Engineering.

FRENCH.

See Modern Languages.

GEOLOGY AND MINING ENGINEERING.

Professor LOGAN.

Assistant Professor ROARK.

1. **1a, 1b, Physiography.**—This course is intended to constitute an introduction to the physical sciences. It treats of the earth in its planetary relationships; of the atmosphere, its composition, temperature, and moisture conditions; of climate, rainfall, winds and weather; of the oceans, their tides and currents, work and effect upon climatic conditions; of the land masses and their divisions; of topographic features, mountains, volcanoes, plateaus, plains, and lake basins; of the phenomena of geysers, hot springs, glaciers, and underground waters; of the distribution of plants, animals and man. *Five hours per week for one term. Required of all Freshmen. Four hours per week of laboratory work are required of Science students and two hours per week of students in Industrial Education.* Mr. ROARK.

2. **General Geology.**—A study of the elementary principles of geology including a study of constructive and destructive forces and their results; the origin of soil; the divisions of geological time; the rocks, life, and principal economic products of each geological period. The treatment of the subject is varied to meet the needs of the classes of students taking this course. *Five hours of class room work and three hours of laboratory work per week for one term. Required of Seniors in Agriculture, Pedagogy, and Sophomores in Science.*

Professor LOGAN and Mr. ROARK.

3. **Elementary Geology.**—A brief course intended as an introduction to the science, and comprising a study of the materials of the earth's crust and the manner of their occurrence; a study of geological forces and the chemical and mechanical changes which they produce and the surface features to which they give rise. *Five hours of class room work and two hours of laboratory work per week for one term. Required of Juniors in Civil and Mining Engineering.*

Professor LOGAN and Mr. ROARK.

- 3b. **Historical Geology.**—A study of the history of the earth and the development of its life; the origin of the earth and the formation of its lithosphere; the dawn and progressive changes of life as recorded in the rocks of the lithosphere and a study

of the principal types of life found in the fossil state. Special attention is directed toward the geological evolution of the North American Continent. *Five hours of class room work and two hours of laboratory work per week for one-half term. Required of Juniors in Civil and Mining Engineering.*

Professor LOGAN.

4. **Economic Geology and Ore Deposits.**—The first part of the course embraces a study, from a practical and scientific standpoint, of the chief economic products of the different geological formations. The course embraces a study of the nature, origin, quantity, mode of occurrence, geologic and geographic distribution of such products as, coal, gas, oil, precious minerals, cements, marls, and building stones; special attention being directed to the important mineral products of Mississippi. The second part of the course embraces a study of the ore deposits, their genesis, the occurrence, geological association, classification and mode of origin of the important metalliferous minerals. *Five hours of class room work and three hours of laboratory work per week for one term. Required of Seniors in Civil and Mining Engineering.*

Professor LOGAN.

5. **Dynamical Geology.**—A brief course embracing the elementary principles of dynamic geology; designed to give a more comprehensive view of the forces producing land sculpture, such topographic forms as hills, mountains, lake basins, and the various phenomena connected with the gross structure of rocks, such as folds, faults, joints, and fissures; the movements of the rocks of the earth; also the phenomena of extrusive and intrusive matter. *Five hours class room work and two hours of laboratory work per week for one-half term. Required of Juniors in Civil and Mining Engineering.*

Professor LOGAN.

6. **Meteorology and Climatology.**—A study of all atmospheric phenomena bearing upon weather and climate; comprising a consideration of the air, its properties and functions; its weight, pressure, density, temperature, moisture, evaporation, humidity, condensation; clouds, frost, hail, dew, snow; measurement of precipitation; convection; relation of pressure to winds; insolation; isotherms; isobars; effects of winds, currents, and topography on climate; range of temperature; temperate zones; distribution of pressure and winds; relation of tem-

perature and pressure; relation of pressure and winds; trades and anti-trades; monsoons, cyclones and anti-cyclones; hurricanes; typhoons; tornadoes; warm and cold waves; blizzards; rain-falls; laws of distribution; weather and climate; meteorological instruments; construction of weather maps. *Required of students in Science and others specializing in the work of the department. Five hours per week.*

Professor LOGAN.

7. **Mineralogy 1 (Crystallography).**—The course in Mineralogy is introduced by a brief course in Crystallography which includes a study of the six systems of crystallization and the modifications under each, the various forms being studied by means of models and actual mineral crystals. This subject is followed by a study of the physical properties of minerals, the different properties being illustrated by typical mineral species. *One hour class room work and four hours laboratory work per week for one term.*

Mr. ROARK.

- 7a. **Mineralogy 2 (Blowpipe Analysis).**—A study of the physical properties of minerals is followed by a study of the more common metalliferous and silicate minerals, and the method of their determination by the use of the blow-pipe. The determination of fifty unknown minerals is usually required before the close of the term. *One hour class room work and four hours laboratory work per week for one term. Required of Seniors in Civil and Mining Engineering.*

Mr. ROARK.

- 7b. **Mineralogy 3 (Assaying).**—The first part of the course includes a study of ore sampling and slag sampling; fire-assay methods, scorification and crucible assays, of gold, silver, lead and other metals in ore samples. The second part of the course includes a study of methods in "wet" assaying, determinations employing methods of volumetric quantitative analysis. The list of determinations includes the common metals such as lead, copper, iron, zinc, silica, sulphur and others. *Lectures one hour and laboratory work, four hours per week for one term. Required of Seniors in Civil and Mining Engineering.*

Professor LOGAN and Mr. ROARK.

8. **Mining 1.**—A course in the principles of mining including prospecting, preliminary mine development, location of plant, mechanical equipment, tunnelling, shaft-sinking, the life of mines, methods of administration, risk in mining investments and kindred topics. *Two hours of class room work and two*

hours of laboratory work per week for one term. Required of Seniors in Civil and Mining Engineering.

Professor LOGAN.

9. **Mining 2.**—A course in practice including a study of mine timbers and drift sets; driving in running ground; shaft timbering, stopping, filling levels, cross cuts, stations, rises, winzes, caving systems; use of square-set; head frame construction; transportation in mines; drainage; methods of ore breaking; use of explosives and other topics. *Five hours of class room work and two hours of laboratory work per week for one term. Required of Seniors in Civil and Mining Engineering.*

Professor LOGAN.

10. **Metallurgy.**—A course on the occurrence, smelting and refining of gold, silver, copper, lead and zinc; including a discussion of shaft reverberatory smelting, open hearth and blast furnace methods; cyanide and chlorination processes; the recovery of gold by amalgamation processes, pyrometry, calorimetry and electrolytic processes. *Lectures three hours per week for one term. Open to Special students or graduate students having completed course 6.*

Professor LOGAN.

11. **Metallography.**—A course intended to familiarize the student with the changes which steel and other metals undergo when subjected to mechanical stresses and heat, the theory of the structure of alloys; and the structure and microscopic characteristics of the useful alloys. *Required as above. Five hours per week.*

Professor LOGAN.

12. **Structural Geology.**—Comprising the study of fracture and flow; fractures, faults; rock flowage; structures common to fracture zones and to flowage zones; types of mountains; their relations to faults and folds; localization of mountains; the larger units of structure, plateaus, ocean basins, continents; forces of deformation; isostasy; tension, its causes; major causes of deformation, minor causes; relation between deformation and vulcanism; unconformities, causes, identification and interpretation. *Five hours theory and four hours practice per week. Elective for Science students prepared to take the work.*

Professor LOGAN.

EQUIPMENT.

The equipment of this department consists of two lecture rooms, one of which is fitted with a screen and shades making it suitable for illustrative work; a laboratory equipped with suitable apparatus for the study of min-

eralogy; a laboratory for work in crystallography and the testing of clays; a museum containing a collection of rocks, soils, minerals, marls, fossils of different geological periods, especially of the Cretaceous, and other illustrative material, a combination of reflectoscope and stereopticon with several hundred lantern slides, photographs and other illustrations on the subjects of geology, physiography, and mining. In addition the department is equipped with a set of relief maps, a set of geographical maps, a set of paleontologic charts and material in the way of globes and models. For work in physiography the laboratory of this department is equipped with a barometer, rain guage, maximum and minimum thermometers, Hygrometer, air tester, aneroid barometer, Heliodon, sun dial, and anomometer. The department library contains many geological bulletins, and reports; a set of folios, topographic maps and other literature. The college library contains all of the reports, monographs, and bulletins of the U. S. G. S., many of the state survey reports, and other reference books of use in the department.

The department has issued the following reports which are for free distribution: The Geology of Oktibbeha County, the Underground Waters of Mississippi, The Brick Clays of Mississippi, The Pottery Clays of Mississippi, The Soils of Mississippi, The Structural Materials of Mississippi and other reports are in course of preparation.

GERMAN.

See Modern Languages.

HISTORY AND CIVICS.

Professor HERBERT.

Associate Professor GARNER.

It is the purpose of the Department of History and Civics, (a) to give the students some insight into the great

historic movements of the world; (b) to give them some acquaintance with the method of historical study; (c) to give them such a knowledge of American history, governmental institutions, and economics as will enable them to understand and appreciate the privileges and duties of citizens. In order to carry out this three-fold purpose, liberal use of the college library is required, and the following courses are offered:

HISTORY.

- 1. English History.**—This course is a general treatment of the whole field of English history, with stress laid upon the leading facts and upon the growth of British institutions as a foundation for the study of American institutions. The text-book in use is Montgomery's *Leading Facts of English History*. *Three hours per week, first term. Required of all Freshmen except those taking the course in Industrial Education.*

Professor HERBERT and Professor GARNER.

- 14. Mediaeval and Modern History.**—This course treats of the same period and is based on the same text, as course 10. It is divided into two parts, A and B. Part A begins with the development of modern nations and continues through the Protestant Revolt in Germany; Part B takes up where Part A leaves off, and continues through the book. Each part is given as the work for one term. *Required of all Agricultural, Engineering and General Science Freshmen.*

Professor HERBERT and Professor GARNER.

- 15. Mediaeval and Modern History.**—This course is a more thorough study of Mediaeval and Modern History than is given in either course 10, or 14. Robinson's *Readings, and Reports* on assigned topics supplement the text-book and regular class room work. This course is divided into three parts: Part A covers the period from the Fall of the Roman Empire in the West up to the Hundred Years' War; Part B takes up the work with the Hundred Years War and extends up to the end of the Protestant Revolution; Part C takes up the work with the end of the Protestant Revolution and takes it up to the end of the book. Each part is to constitute one term's work. *Three hours per week for three terms. Required of Pedagogical Freshmen the first, second and third terms.*

Professor HERBERT and Professor GARNER.

18. American History.—The work of this course is based on Thwaites' Colonies, Hart's Formation of the Union, and Wilson's Division and Reunion. Collateral reading and reports and essays on assigned topics will serve to broaden and strengthen the work of the course.

The course is divided into three parts: Part A covers the Colonial period, and completes Thwaites' Colonies; Part B covers the Middle period, and completes Hart's Formation of the Union; Part C covers the field from 1829 to the present time, and completes Wilson's Division and Reunion. Each division is a term's work. *Three hours per week for three terms. Required of Industrial Education Juniors.*

Professor HERBERT.

19. English History.—This course is designed as a brief treatment of the whole field of English history, but more time and emphasis will be given to institutional growth, social, economic, and religious development than in course No. 1. The text used will be Cheyney's Social and Industrial History of England, which will be supplemented with notes, lectures, and class reports. *Five hours per week, first term. Required of Pedagogical Sophomores.* Associate Professor GARNER.

CIVICS.

20. Civil Government.—The salient points in the operation of local, town, county, city and state government in the United States, and a study of the Constitution of the United States and of Mississippi, constitute the work of this course. This course is given by means of a text-book, The American Republic by Woodburn, but collateral reading and reports on assigned topics serve to strengthen the course. *Three hours per week for one term. Required of all Agricultural Seniors.*

Professor HERBERT.

16. Political Science.—Only a brief study of political science, the "science of state," is attempted. The course is a study, from text-book and library, of the origin and historic evolution of the state; of the nature of its organization, its relation to the individuals that compose it, and its relation to other states. Further, the course deals with states as they exist today, stress being laid upon the governments of the United States and the leading nations of Western Europe. The text-book is Gettell's Introduction to Political Science. *Five hours a week for one term. Required of Engineering and Pedagogical Seniors.*

Professor HERBERT.

- 17. Elements of Civil Government.**—This course, as its name states, is an elementary treatment of the subject. It is designed to give Freshmen such facts and principles of government as will train them for better citizenship. The work is given by means of a text-book and as much assigned library work as the time of the students will permit. *Five hours a week for one term. Required of Engineering Freshmen.*

Professor HERBERT.

POLITICAL ECONOMY.

- 5. Principles of Political Economy.**—This course is merely an introduction to the study of economics, and is intended to treat of the subject in a general way. The work is given by means of a text-book—Ely's Outlines of Economics is at present in use—and free class discussion. *Five hours per week, second term. Required of all members of the Senior Class, except those taking the Agricultural course.*

Professor HERBERT.

HORTICULTURE.

Professor MCKAY.

Mr. HAYDEN.

Instruction in this department is both theoretical and practical. Theoretical instruction is obtained from text-books, lectures, reference books, experiment station bulletins, magazines and other publications found in the college and the department libraries. In the garden, orchard, vineyard, green-houses, upon the campus and grounds, and in the horticultural laboratory, object lessons are presented and work required which illustrate in a practical manner class room instruction. Throughout the entire course much stress is placed upon laboratory work and field practice.

Instruction in the following subjects is offered by the Department of Horticulture:

- 25. Principles of Horticulture.**—The aim of this course is to give the student instruction in the underlying principles of the

science of horticulture upon which other work in this subject must depend. Among the many topics considered are the following: (a) Methods of propagating plants by seeds, cuttings, layers, grafting and budding; (b) the construction and management of hotbeds and cold-frames; (c) the care of plants and trees in the nursery. Text: Bailey's Nursery Book supplemented by lectures. *First term, three hours per week in class room and two hours per week laboratory and field practice. Required of Agricultural Sophomores and of Pedagogical Sophomores electing Agriculture.*

Professor MCKAY and Mr. HAYDEN.

31. **Olericulture, Pomology, and Floriculture.**—This course endeavors to acquaint students with such vegetables, fruits and flowers as should be found in the best gardens, orchards and floral plantings, and to instruct them in the best methods of planting, cultivating, fertilizing, training and otherwise caring for such crops. Text and reference books: Bailey's Principles of Fruit Growing, Oemler's Truck Farming at the South, Goff's Lessons in Fruit Growing, supplemented by lectures. *Second term, three hours per week in class room and two hours per week laboratory and field practice. Required of Agricultural Juniors. Prerequisites, Horticulture 25.*

Professor MCKAY and Mr. HAYDEN.

27. **Advanced Horticulture.**—Research work in (a) Olericulture; (b) Pomology; (c) Floriculture. This course offers students time and facilities for acquiring additional knowledge on horticultural subjects previously considered. It proposes to acquaint students more intimately with the science and the art of horticulture, to quicken the investigative spirit and to start them in the work of specializing in this branch of agriculture. Investigative work is outlined in the laboratory, garden, orchard, green-houses, library and upon the campus and grounds, and students are required to prepare bibliographies on topics assigned. Text and reference books: Bailey's Evolution of Our Native Fruits, Bailey's Cyclopedia of American Horticulture, Taft's Greenhouse Management, supplemented by lectures. *Second term, two hours per week in class room and four hours per week laboratory and field practice. Prerequisites, Horticulture 25 and 31. Elective for Agricultural Seniors.*

Professor MCKAY and Mr. HAYDEN.

- 32. Commercial Horticulture.**—This course endeavors to instruct students in (a) the selection, preparation and cultivation of soils devoted to fruits and vegetables grown for market; the rotation of garden and orchard crops with farm crops; (c) the liberal use of farm manures and commercial fertilizers in connection with thorough drainage and irrigation; (d) the best methods of gathering, packing and marketing garden and orchard products. Lectures and such books, periodicals and equipment as will demonstrate in the best manner work being considered. *Third term, three hours per week in class room and two hours per week laboratory and field practice. Elective for Agricultural Seniors.*

Professor MCKAY and Mr. HAYDEN.

- 33. Landscape Gardening.**—In the limited time assigned to this subject students will be instructed in the best methods of planning and laying out home and school grounds, public squares, cemeteries, parks, etc., and in the art of embellishing such grounds with walks, drives, trees, shrubs, grass, flowers, etc. Lectures and such reference books as Waugh's *Landscape Beautiful*, Waugh's *Landscape Gardening*, Johnson's *Residential Sites and Environments*, Weidenmann's *Beautifying Country Homes*. *Third term, three hours in class room and two hours laboratory and field practice. Elective for Agricultural Seniors.*

Professor MCKAY and Mr. HAYDEN.

- 30. (a) The Home Garden, (b) The Home Orchard, (c) Beautifying the Home Grounds.**—This course is especially arranged for students taking the Two-Year Course in Agriculture. It is a condensed and simplified form of courses 25 and 31. Time given to this course is as follows: *During the third term, first year, three hours per week in class room and two hours per week laboratory and field practice; during the third term, second year, three hours per week in class room and two hours in laboratory and field practice. Required of all students taking the Two-Year Course in Agriculture.*

Professor MCKAY and Mr. HAYDEN.

HYGIENE.

Professor MARSHALL.

The course in hygiene, which is taught only in the first term, will be confined strictly to personal hygiene, as the

limited time in which this branch is taught will not permit us to go further into details.

It has been deemed wise and best that this subject should be taught by lectures as the essential points which the student should know can be more easily understood by being instructed in this manner than if they were to be confined strictly to a text-book.

However, this course of lectures will follow as closely as practicable the principles of hygiene as laid down by Dr. Pyle in his text-book on this subject.

Special lectures will be prepared and delivered to the class beginning and during the first term on the following subjects: Venereal diseases and their injurious effects, from both a moral and a physical standpoint; dietetics, ventilation, proper clothing, bathing, and all kindred subjects on personal hygiene, will be discussed in these lectures. The proper kind and amount of exercise, when and how to take it is another subject closely allied to personal hygiene, which will be discussed in these lectures.

LOGIC.

See Industrial Education.

MACHINE SHOP.

See Mechanical Engineering.

MANUAL TRAINING.

See Mechanical Engineering.

MARKETS AND RURAL ECONOMICS.

Professor BROOKS.

The immense amount of wealth involved and the great amount of work devoted to distribution and marketing render the problems of this branch of human activities of prime importance. The neglect of the purely business end of farming has had a deleterious effect on the agricultural class.

Production and distribution are co-ordinate: The cost of both, and the demand, determine commercial values. In this new department the subject of markets is given its rightful place in the economy of our civilization. The universal interest manifested, and the developments that have taken place during the last few years, justify the recognition it is receiving by our colleges and universities.

- 1. Markets and Rural Economics.**—The course covers three main divisions: (a) Rural economics; (b) Marketing; (c) Financing. Under rural economics is discussed farm life, farm management, relation of production to distribution, effect of commerce on rural development, agencies controlling price, and organized agriculture at home and abroad. Under marketing the business side of agriculture is considered, distribution is treated in the light of a science in its relation to production and consumption. Marketing by manufacturers, by commercial corporations and by farmers is examined in detail. Marketing by individuals, by corporations and by co-operative associations is discussed and their relative merits considered. A study of trusts, pools and combines and of conditions which have led to the development of large business combinations are followed; and a description of the methods of organization of typical industries; an analysis of the advantages and disadvantages of large business organization; and a consideration of the different policies of governmental regulation. The operation of cotton, grain, stock and farmers' exchanges. Under financing is considered the financing of production and distribution; influence of banking on agriculture; rural credits in Europe and in the United States. *One term, four hours per week. Required of Agricultural Juniors, Industrial Education Seniors, and Two-Year Course in Agriculture students. Open to all Juniors and Seniors.*

MATHEMATICS.

Professor WALKER.

Associate Professor STARK.

Assistant Professor WALLACE.

Mr. WRIGHT.

Mr. MAXWELL.

The object of this department is to furnish thorough and practical instruction in the courses which it offers.

2. **Bookkeeping.**—An elementary course in bookkeeping and banking. It is thorough and practical, and fits one to take charge of any ordinary set of books. *Five hours per week, first term. Required of all Freshmen except Agricultural.* Mr. MAXWELL.

22. **Plane and Solid Geometry.**—Rectilinear figures, the circle, similar polygons, regular polygons, and circles, lines, and planes, in space, polyhedrons, cylinders, cones, and the sphere. Robbins's Plane and Solid Geometry. *Three hours per week, Freshman year. Required of Agricultural Freshmen.*

Mr. WALLACE and Mr. WRIGHT.

23. **Plane and Solid Geometry.**—The same as course 22, but more comprehensive. *Five hours per week, Freshman year. Required of all Freshmen except Agricultural.*

Mr. WALLACE and Mr. WRIGHT.

24. **Advanced Algebra.**—Quadratics, indeterminate co-efficients, binomial theorem, and common logarithms. *Three hours per week, first and second terms. Required of Agricultural Sophomores.*

Professor WALLACE.

25. **Advanced Algebra.**—Same as course 24, but more comprehensive. *Five hours per week, first and second terms. Required of all except Agricultural Sophomores.*

Professors STARK and WALLACE.

26. **Plane and Spherical Trigonometry.**—Trigonometric functions of acute angles, the right triangle, goniometry, the oblique triangle, the right spherical triangle, and the oblique spherical triangle. Wentworth's Plane and Spherical Trigonometry. *Three hours per week, third term. Required of Agricultural Sophomores.*

Professor STARK.

27. **Plane and Spherical Trigonometry.**—The same as course 7, but more comprehensive. *Five hours per week, third term. Required of all Sophomores except Agricultural.*

Professor STARK.

9. **Analytic Geometry.**—Loci and their equations, the straight line, the circle, systems of co-ordinates, and the conic sections. Wentworth's *Analytic Geometry*. *Five hours per week, second term. Required of Engineering Juniors.*

Professor WALKER.

10. **Differential Calculus.**—Differentiation of algebraic, logarithmic, and exponential functions; successive differentiation, indeterminate forms, expansion of functions, maxima and minima, points of inflexion and singular points. Taylor's *Differential Calculus, Revised*. *Five hours per week, third term. Required of Engineering Juniors.*

Professor WALKER.

11. **Integral Calculus.**—Standard forms, direct integration, definite integrals, integration of rational fractions, integration by rationalization, integration by parts, double and triple integration. Taylor's *Integral Calculus, Revised*. *Five hours per week, first term. Required of Engineering Seniors.*

Professor WALKER.

13. **Analytic Mechanics.**—Composition and resolution of forces, moments, couples, center of gravity, friction, machines, rectilinear and curvilinear motion, constrained motion, work and energy, and moment of inertia. Bowser's *Analytic Mechanics*. *Five hours per week, second term. Required of Engineering Seniors.*

Professor WALKER.

15. **Advanced Analytic Geometry.**—Homogeneous co-ordinates of point and line, principle of duality, poles and polars, reciprocal polars, loci of the second order, and elements of higher plane curves. *Informal. Open to graduates only.*

Professor WALKER.

16. **Solid Analytic Geometry.**—Elements of analytic geometry of three dimensions, quadric surfaces, and twisted curves and surfaces. *Informal. Open to graduates only.*

Professor WALKER.

17. **Advanced Differential Calculus.**—Fundamental principles and general methods with applications to problems arising in mathematics and physics. *Informal. Open to graduates only.*

Professor WALKER.

18. **Advanced Integral Calculus.**—A complete treatment of the various methods of integration, definite integrals, multiple integral and elliptic integrals, and the elements of differential equations. *Informal. Open to graduates only.*

Professor WALKER.

19. **Theory of Equations.**—Study of algebraic equations, transformations, determinants, and the solutions of numerical equations. *Informal. Open to graduates only.*

Professor WALKER.

20. **Elements of Theory of Functions.**—Infinite series and integration, conformal representation, and algebraic functions and their integrals. *Informal. Open to graduates only.*

MECHANICAL ENGINEERING.

Professor CARPENTER.

Associate Professor BRAGG.

Assistant Professor FOX.

Mr. BAKER.

Mr. GILES.

Mr. LEAKE.

Mr. MONTGOMERY.

The Department of Mechanical Engineering, including class-room, laboratories, and shops, is located in the engineering building.

Instruction in this department consists of class room work and practical work in the shop or laboratory, the two lines of work being designed to emphasize and reinforce each other. The course covers a period of four years and aims to fit students to enter successfully into practical engineering work, and to this end lays stress on mechanical drawing, shop construction, laboratory practice, and the economic operation of power plants.

The class room work is taught by text-book, lectures, and problems. In the design rooms, the instruction is given by lecture and reference books, together with practice using manufacturerers' drafting room methods.

The student, in the latter part of his course, is required to operate, test, and report on various pieces of apparatus and equipment in the shops, laboratory, and the central power plant.

For the benefit of students who for any reason are not able to remain in college to complete the full course, but who wish some training in drawing, shop practice, and power plant operation, a special two-year course has been arranged. This course is particularly recommended to young men who contemplate entering the mechanical trades, either preceding or following the apprenticeship period. For teachers who desire to secure preparation in the subjects pertaining to manual training, special shop courses are arranged. These will include such of the regular courses as are adapted to the requirements of the class and suitable supplementary courses in wood and metal work. Lectures on the arrangement of courses and the equipment for instruction in manual training are offered.

It is the desire of the Mechanical Engineering Department to be of all possible service to owners and operators of power plants, of machine shops, and of manufacturing industries. To this end, correspondence is invited on any problems along mechanical engineering lines and the technical skill and equipment of the department is at the service of any citizen of the state.

The courses are as follows:

28. **Wood Work.**—Elementary instruction in bench work, involving the use of ordinary hand tools, such as planes, saws, squares, chisels, etc. The exercises given and the models constructed are designed to make the student familiar with, and give him skill, in the use of these tools. *Four hours a week, first term required of all Freshmen. Four hours a week, first term, required of First Year Training course. Two hours a week, first term, required of First Year Agricultural Short Course.*

Mr. BRAGG, Mr. LEAKE and Mr. MONTGOMERY.

30. **Wood Work.**—Prerequisite, course 28. This is a continuation of course 28. The work is given largely along cabinet lines. Such objects as drawing boards, T-squares, tabourets, chairs, book-cases, tables, etc., are constructed. The student obtains a good working knowledge of wood-working machinery, such as band saws, jig saws, circular saws, surface planers, hand jointers, boring machines, etc. Special attention is given to hand finishing, scraping and sand-papering, and all students who finish the course, get some experience in gluing, staining, filling and varnishing. The latter half of the spring term is devoted to wood turning, which includes turning, between centers, face plate and chuck turning, polishing and finishing. *Six hours a week, second and third terms. Required of Engineering Freshmen.* Mr. BRAGG.
29. **Wood Work.**—Prerequisite, course 28. This is a continuation of course 28, and it is intended to make it as short and comprehensive as possible for those who expect to follow agricultural pursuits. In addition to practical work at the bench, short talks are given on the erection of simple buildings, repair work, estimating bills of material, measuring lumber, etc. *Two hours a week second term. Required of first year Agricultural Short Course.* Mr. BRAGG and Mr. MONTGOMERY.
31. **Wood Work.**—Prerequisite, course 28. A course for Textile students. This course is essentially the same as course 30, with the exception that Textile students are given a limited amount of work in simple pattern making. *Six hours a week second term, four hours a week third term. Required of Textile Freshmen.* Mr. BRAGG.
54. **Wood Work.**—Prerequisite, course 28. Same as course 30, except for time. *Four hours a week second and third terms. Required of General Science Freshmen.* Mr. BRAGG and Mr. LEAKE.
55. **Wood Work.**—Prerequisite, course 28. This is a continuation of course 28, but brings into use a larger and more varied assortment of tools, and all work finished is of intrinsic value in the home or elsewhere. The work increases in difficulty and complexity as the students advance. *Four hours a week, second and third terms. Required of First Year Training Course.* Mr. BRAGG and Mr. MONTGOMERY.
56. **Wood Work.**—Prerequisite, courses 28 and 55. This is a continuation of course 55. The hand tools are supplemented

in some measure, by machines. The work given consists of small drawing boards, T-square, book racks, etc. Lectures are given on care and sharpening of tools, selection and protection of material, shop economics, etc. *Four hours a week, first, second and third terms. Required of second year Training Course.* Mr. BRAGG and Mr. MONTGOMERY.

59. **Manual Training.**—This is a course in paper folding, cardboard construction, elementary and advanced knife work, and Venetian iron work. These subjects are given in sufficient amounts to furnish the students with a good working knowledge of these subjects as taught in the lower grades of the public schools. *Four hours a week, second and third terms. Required of Pedagogy Freshmen.* Mr. BRAGG and Mr. LEAKE.

60. **Manual Training.**—Prerequisite, course 28. This is a continuation of course 28. The work is based on the logical sequence of the exercises involved, from the simpler to the more complex, from the easy to the more difficult. The course admits and encourages original designs, but these must be acceptable to the instructor. *Four hours a week, two terms. Required of Pedagogical Sophomores.*

Mr. BRAGG and Mr. LEAKE.

61. **Manual Training.**—A course in wood turning, consisting of turning between centers, face plate and chuck turning, polishing and finishing. *Four hours a week, one term. Required of Pedagogy Juniors.* Mr. BRAGG.

62. **Manual Training.**—A course in shop drawing, Venetian iron work and brass work. *Four hours a week, one term. Required of Pedagogical Sophomores.*

Mr. BRAGG and Mr. LEAKE.

57. **Wood Work.**—A lecture and quiz course in mechanical technology dealing with the installation and operation of a wood working plant, including a study of hand and machine tools, shafting, hangers, countershafts, etc. *One hour a week, one term. Required of Pedagogical Sophomores and Engineering Freshmen.* Mr. BRAGG and Mr. LEAKE.

63. **Manual Training.**—Lectures and quizzes on the origin and purpose of manual training, its relation to the public school and its probable influence in the building of character. *One hour a week, one term. Required of Pedagogy Juniors.*

Mr. BRAGG.

- 58. Wood Work.**—Prerequisite, course 30. A course in pattern making, comprising the making of simple patterns until fundamental principles are mastered, after which patterns of machines and repair parts are made. *Four hours a week, one term. Required of Engineering Sophomores.* Mr. BRAGG.
- 33. Forge Work.**—A study of forge construction, forge tools and the making of forge fires. This course involves the use of hand tools in an effort to give proficiency. Exercises covering the principles of simple forge work, such as drawing, up-setting and bending, cutting, punching, and welding are made. A short course in steel forging and the making of machinists' hand and lathe tools, including hardening, annealing, tempering, and case hardening, is given. From time to time lectures are given on the metallurgy of iron and steel, on case hardening and tempering. *Four hours a week, two terms. Required of all Engineering Sophomores.* Mr. BAKER.
- 34. Foundry.**—A course for Engineering students involving the simple principles of foundry practice with patterns made by the students. The work for the most part consists of small articles, such as the light machine parts, and the stock pieces used for exercise work in the machine shop. A sufficient variety is introduced for the student to acquire a good general knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand in two part flasks, but some core work and more complicated work is introduced to illustrate the processes in advanced foundry work. Instruction is given in operating the cupola and in pouring. Foundry practice is supplemented by notes on the metallurgy and working of the metals used in the industrial arts. *Four hours a week, one term. Required of all Engineering Sophomores and Textile Freshmen.* Mr. BAKER.
- 74. Forge Work.**—Description of forge and tools. A short course involving the principles of simple forge work, as drawing out, bending, up-setting, and welding. This is a course covering the general points that are found in a farm blacksmith shop. *Two hours a week, one term. Required of all students who are taking the Agricultural Short Course.* Mr. BAKER.
- 76. Forge Work.**—Description of forge and tools. The construction of a graduated set of exercises in manual training, embracing the principles of drawing out, bending, up-setting, and welding; making of various articles for household use, as

andirons, fire sets, flower stands, and other articles of bent iron. *Four hours a week, one term. Required of Pedagogical Juniors.*
Mr. BAKER.

35. **Machine Shop.**—An elementary course in machine work, embracing fundamental principles, such as chipping, filing, drilling, tapping, etc., with light machine tool instruction on lathe, drill press, planer, and shaper. *Four hours a week, one term. Required of Industrial Education Juniors.*

Mr. GILES.

39. **Machine Shop.**—A course in machine work involving the use of hand tools at the vise in chipping, cutting and filing. This is followed by lathe work which is taught by a system of exercises, including straight and taper turning, grooving, facing, thread cutting, and finishing. Following this the uses of other machine tools are taught including the milling machine where exercises in gear and pinion cutting are made as well as other work of this machine. *Four hours a week, three terms. Required of Mechanical and Electrical Engineering Juniors.*

Mr. GILES.

47. **Machine Shop.**—Prerequisite 39. A continuation of course 39 involving the more advanced use of machine shop tools, the preparation of bearings, eccentrics, crank-shafts, complex gearing, and repairs to machinery. *Four hours a week, three terms. Required of Mechanical and Electrical Seniors.*

Mr. GILES.

64. **Engineering Mechanics.**—A course leading up to general engineering design and embracing: (1) A study of the various mechanisms employed in machine construction; (2) the theoretical design with regard to strength of the elements of machines and other structures such as beams, girders, shafts, cylinders, etc. Accompanying this course, is a course in the strength of materials laboratory where the principles studied in the class room are illustrated by the use of testing machines, *Class room work, two hours a week, for three terms.*

- 64a. **Laboratory Work.**—*Three hours a week, one term. Required of Mechanical, and Electrical Engineering Juniors.*

Professor CARPENTER and Mr. FOX.

37. **Machine Drawing.**—Prerequisite, all required in drawing in Freshman and Sophomore class. Practical work on the drawing board, designed to familiarize the student with

elements of machines, and later the combinations of the elements into complete machines. The drawing room methods of the leading manufacturing plants are followed closely. The principles of design studied in the class room are applied, and details are designed with special regard to economy in manufacture. *Three hours a week, three terms. Required of Mechanical and Textile and Electrical Juniors.* Mr. Fox.

65. **Mechanical Engineering.**—Steam engines and steam boilers. Lectures and recitations on the generation of steam, the design, construction, operation, and testing of boilers of different types, together with the necessary boiler plant accessories. This is followed by a study of the elementary thermodynamics of the heat engine, and the mechanics, design, construction, operation, and testing of the steam engine. *Class room work, three hours a week, three terms. 65a Laboratory work, three hours a week, two terms. Required of Mechanical, Electrical, Textile and Engineering Juniors.* Professor CARPENTER.

66. **Engineering Design.**—Prerequisite, Mechanical Engineering 37 and 64. This course embraces a study of the design of steam boilers, steam engines, pumping machinery, etc., with reference to strength, speed regulation, construction, and economic operation, also a study of the design and arrangement of power plants. *Class room three hours a week, two terms. 66a Practice, three hours a week, three terms. Required of Mechanical Engineering Seniors.*

Professor CARPENTER and Mr. Fox.

67. **Engineering Design.**—This course is the same as 66, but the amount of work required is reduced in proportion to the amount of time given to the subject. *Class room, three hours a week, one term. 67a Practice, three hours a week, three terms. Required of Electrical Engineering Seniors.*

Professor CARPENTER and Mr. Fox.

68. **Heating and Ventilation.**—The different methods of heating and ventilation of buildings are studied. Special attention is given to the design and operation of the different systems. *Two hours a week, one term. Required of Mechanical Engineering and Electrical Engineering Seniors.*

Professor CARPENTER.

69. **Plumbing and Sanitation.**—This is a short descriptive course consisting of lectures on plumbing, fittings, fixtures, and

combinations and the correct installation of the same, including vents, drains, etc. *Two hours a week, one term. Required of Mechanical Engineering Seniors.*

Professor CARPENTER.

70. **Steam Turbines.**—This is a descriptive course and gives attention to the construction and operation of the different types of steam turbines as used in the modern large power plants. *Two hours a week, one term. Required of Mechanical Engineering Seniors.*

Professor CARPENTER.

71. **Gas Engines and Gas Producers.**—This subject is taught by the use of text-book, lectures, manufacturers' catalogues and drawings, and gives attention to the construction and operation of gas engines and producers as used in modern gas producer power plants. *Three hours a week, one term. Required of Mechanical Engineering Seniors.*

Professor CARPENTER.

72. **Mechanical Refrigeration.**—A study of the principles of construction and operation of the several ice-making systems in use, also a study of the design and installation of cold storage compartments. An ice and cold storage plant is a part of the central power plant equipment, and a complete test of this plant is required. *Two hours a week, one term. Required of Mechanical Engineering Seniors.*

Professor CARPENTER.

73. **Mechanical Engineering.**—A descriptive course consisting of lectures and quizzes on the operation of steam boilers, steam engines, and gas engines, together with discussions on heating and plumbing, as applied to the Manual Training School. *One hour a week, one term. Required of Pedagogical Juniors.*

Professor CARPENTER.

77. **Mechanical Laboratory.**—This course includes work in testing the strength of materials, as iron, steel, wood, and cement in tension, compression, and transverse loading. *Three hours a week, one term. Required of Civil Engineering Seniors.*

Mr. Fox.

78. **Mechanical Laboratory.** This course consists of fuel analysis, oil and lubricant testing, and indicator card analysis. Also test of engines, boilers, steam turbines, gasoline engines, and complete test of power plants. *Four hours a week, one term; six hours a week, two terms. Required of Mechanical Engineering Seniors. Three hours a week, three terms. Required of Electrical Engineering Seniors.*

Professor CARPENTER and Mr. Fox.

EQUIPMENT.

The wood shop equipment for bench work consists of excellent work benches supplied with quick acting vises, saws, planes, chisels, etc., ordinarily found in a carpenter's kit, and a large number of supplementatry tools kept in the tool-room. The equipment for wood turning consists of small lathes and tools for general work and a large pattern-maker's lathe for special work. A large room is provided for power machinery and contains a rip saw, cut-off saw, surface planer, moulding machine, resaw, jointer, and band and jig saw. A paint room and store room is provided for the finishing of articles and the storing of the complete product.

The forge shop equipment is modern, consisting of twenty-four down draft forges and the necessary hand tools. The shop is also provided with a punch and shear, angle bender, grinder, and floor tools, such as cone, surface plater, swage block, etc.

The foundry is equipped with cupola melting furnace, brass furnace, core oven, and the usual moulders' tools.

The machine shop has full hand tool equipment and a variety of types and sizes of machine lathes, also a planer, shaper, grinders, drill presses and a milling machine.

The engineering laboratory contains a one hundred thousand pound Olsen testing machine fitted for tension compression, and transverse testing of materials, a fifty-thousand pound torsion testing machine and apparatus for testing cement, oils, fuels, and flue gases. The laboratory also contains Westinghouse air brake appliances, steam engines, gas engines, pumps, steam turbine, condenser, injectors, water motor, hydraulic ram, and hot air engine with the necessary instruments and apparatus for testing the same.

In addition to the laboratory, the Mechanical Engineering Department has charge of the central water, light, power and heating plant, the equipment of which is avail-

able for test purposes. The plant consists of five Sterling water tube boilers, one Babcox and Wilcox water tube boiler, simple and compound high speed automatic engines, Corless engine, air compressors, pumps, a ten-ton ice making and cold storage plant, and other power plant accessories. Students are employed in maintaining the power plant service as night firemen on three hour shifts, and as heat and plumbing attendants in the dormitories and other college buildings, thus assisting a limited number of students to pay a portion of their expenses and giving them valuable experience in power plant work.

METALLURGY.

See Geology and Mining Engineering.

MILITARY SCIENCE AND TACTICS.

Professor ANDING.

For the purpose of discipline and practical instruction the cadets are organized as a regiment of infantry with three battalions of four companies each, and a band and bugle and drum corps, with the usual cadet officers and cadet non-commissioned officers for line and staff. All dormitory and mess-hall cadets are located in the dormitory by companies, and are at all times under the supervision of their company officers and non-commissioned officers. The cadet officers and cadet non-commissioned officers of the corps are selected from those having the strongest moral characters, who have been active and soldier-like in the performance of duty, and exemplary in their general deportment, with due regard for academic standing and length of service in the corps. Ordinarily commissioned officers are appointed from the senior class, sergeants from the junior class, and corporals from the sophomore class.

The regiment is under the command of the Commandant of Cadets, who is given the honorary rank of Colonel, through whom discipline is maintained in all departments. The cadets are at all times under military control, and are thus taught habits of promptness and obedience to lawful authority, which will be of great value to the communities to which they belong. Members of the higher classes also learn to control others by exercising lawful authority over them, and are thus fitted for greater responsibilities at home and as citizens of the state.

The course of instruction is both theoretical and practical.

THEORETICAL COURSES.

1. **Drill and Guard Duty.**—U. S. Infantry Drill Regulations to include the School of the Soldier, Squad, Company and Battalion, in Close and Extended Order, Advanced Guard and Outpost Duty, Marches, Camping, and Ceremonies. U. S. Guard Manual to include the duties of sentinels, non-commissioned and commissioned officers of the guard and officer of the day; manual of the bayonet; Field Service Regulations to include "Organization," "The Service of Information," and "The Service of Security," and Small Arms Firing Manual to include "Position and Aiming Drills." *Three hours per week. Required of all cadets in their Sophomore and Junior year.*
Professor ANDING.

2. **Military Science.**—In view of the fact that very few of the cadets ever go into the regular service, but that a large number do go and are now in the National Guard of the state, the course in military science will include, in the form of conferences or lectures, such things as the Guard most needs, and a knowledge of which is now lacking. This part of the course includes such subjects as Military courtesy, discipline, Military correspondence, forms that the National Guardsmen will be called on to prepare and understand, extracts from Field Service Regulations, and the Firing Regulations, and the care of the rifle and the equipments furnished by the state and Government. In detailing an officer of the army on duty at this college the U. S. Government requires that instruction in this department shall qualify all cadets of the graduating class to serve as company officers in the National Guard of Volunteers.
Professor ANDING.

PRACTICAL COURSES.

3. **Practical Infantry Drill.**—(a) Drill in the School of the Soldier, Squad, Company and Battalion, in close and extended order, ceremonies, advanced guard and outpost duty. *Two hours per week, during three terms. Required of all able-bodied cadets.*
(b) A. M. Drill for twenty minutes each morning (Sundays, rainy and cold days excepted), immediately preceding breakfast, at which time special attention is given to the physical training of the cadet by means of the setting-up exercises and calisthenic exercises as prescribed in the various regulations and manuals.

Professor ANDING and all Cadet Officers.

4. **Practical Guard Duty.**—Guard-mounting, daily, and sentinels posted over dormitories during meals and chapel exercises on Sundays. *Required of all dormitory cadets when detailed.*

Professor ANDING, the Cadet Adjutant, the Officer of the Day and the Officer of the Guard.

5. **Practical Target Practice.**—Preliminary position and aiming drills, a limited preliminary practice at short ranges and at least two (2) practice scores and two (2) record ranges at 200 yards range and the same at 300 yards range. *Required of all able-bodied Juniors.*

Professor ANDING.

For the above practical instruction the United States has provided the college with 700 U. S. magazine rifles, calibre .30, and infantry accoutrements, also a liberal allowance of ammunition, including both ball and blank cartridges for small arms.

MINERALOGY.

See Geology and Mining Engineering.

MINING ENGINEERING.

See Geology and Mining Engineering.

MODERN LANGUAGES.

Professor BOWEN.

Mr. _____.

The aim of this Department is to teach the German, Spanish, and French languages in such a way that they may be of practical value to the student after he leaves college, enabling him to make use of the wealth of information in these languages which is not available in English. This ability is of prime importance to every one who wishes to be thoroughly grounded in the sciences taught at this institution.

In addition to this, the cultural value of the studies is stressed as far as is compatible with the very practical aim of these courses. Much oral work is done, and a correct pronunciation is insisted upon. The department is provided with maps, and a set of Hoelzel pictures, for use as a basis of conversation. The department library contains a number of excellent dictionaries and encyclopedias, a full collection of the authorities on phonetics, historical grammar and philology, and a large collection of monographs in German on the various scientific fields of study in which our students may be interested. Scientific reading forms a part of all courses. Sight reading is developed very fully.

Scientific German.—A course in Scientific German is now offered which will be of incalculable value to all those who expect to become trained chemists, botanists, geologists, engineers, or agriculturists. This course has been worked out with especial care, and places this college in line with the other agricultural and mechanical colleges in this respect. It is especially arranged for General Science students, but it may be elected by Agricultural seniors in the regular course, and by others as a special subject.

Students of Medicine.—The attention of those students who expect to attend medical colleges after graduating here

is especially called to the fact that all first rank medical schools now require at least one year of a modern language for entrance. Students should so arrange their course here that they may take advantage of the work offered in this department.

Spanish.—A two-year course in Spanish will be offered, beginning this session. The people of the Southern States are going to be brought more and more into contact with Central and South America, and Spanish will be a valuable asset.

Master of Science.—This department is now authorized to offer minor courses leading to the degree of Master of Science, and attention is called to courses 37 and 38, below.

Elective Courses.—All courses are open to all students of the college who have the required prerequisite training. Until adequate teaching force is available some of the more advanced courses will be given only in alternate years.

30. **Elementary Spanish.**—This course will give the essentials of grammar, with a great deal of elementary reading. *Five hours a week, three terms. For Industrial Education and General Science Juniors. Open to all.* Professor BOWEN.

31. **Advanced Spanish.**—Reading of the best prose and verse. Special attention will be given to questions concerning Central and South America. *Five hours a week for three terms. For Industrial Education and General Science Seniors. Open to all. Prerequisite, Course 30 or its equivalent.*

Professor BOWEN.

14. **Elementary French.**—This is a course leading to the reading of the best literature, and a knowledge of the customs and modes of thinking of the French. The essentials of grammar are stressed, and reading is begun early. Composition will be begun. *Five hours a week, three terms. For Industrial Education and General Science Juniors. Open to all.*

Mr. ————— or Professor BOWEN.

16. **Advanced French.**—A continuation of course 14. The best prose and verse will be read, including some selections from

scientific and commercial books, and newspapers. The history of French literature will be treated briefly. *Five hours a week, three terms. For Industrial Education and General Science Seniors. Open to all who are prepared to take the course.*

Professor BOWEN.

18. **Elementary German.**—This is a course leading to the reading of the best literature, and a knowledge of the customs and ideals of the Germans. The essentials of grammar and composition are stressed and reading is begun early in the course. *Five hours a week, three terms. For Industrial Education Juniors. Open to all.*

Mr. —————

25. **Elementary Scientific German.**—A brief course in the grammar, with elementary reading, will occupy the first and second terms. The third term will take up the reading of Scientific German, stress being laid upon the accurate rendering of the finer shades of meaning, so that students may be given confidence in handling reference works and laboratory manuals in German in their courses in other departments. *Five hours a week for three terms. For General Science Juniors, Agricultural Seniors, and Industrial Education Juniors. Open to all.*

Professor BOWEN.

20. **Advanced German.**—A continuation of course 18. The best prose and verse will be read. The history of German literature will be treated briefly. *Five hours a week, three terms. For Industrial Education Seniors. Open to all who have had one year of German.*

Mr. —————.

39. **Scientific German.**—*Prerequisite, course 18 or 25, or their equivalent.* Reading of advanced texts in chemistry, botany, zoology, geology, and agriculture. *Five hours a week, three terms. For General Science Seniors. Open to all.*

Professor BOWEN.

32. **General Introduction to the Science of Language.**—*Prerequisite, 15 course hours of some language other than English.* A study of the mechanism of speech; the sounds which occur in English and in French, German and Spanish; the various systems of phonetic characters and diacritics. The second half-term will be devoted to a discussion of the origin of language; the various grammatical categories; morphology; the reasons for the development of the various parts of speech in English and other languages. This course will be of value to those who intend to teach, as it will present the phenomena of

reading and grammar from a new point of view. It will be a great aid also in the study of any of the modern languages. *One term. Three hours recitation, and four hours lectures and laboratory practice. Open to all students prepared to take the course.*

Professor BOWEN.

33. **German Institutions.**—*Prerequisite, 15 course hours of German.* This course is designed to give the student through the medium of the German language, by reading and conversation, a systematized knowledge of the political and commercial geography of the German Empire, together with a sufficient knowledge of the history and political institutions of the country to impress upon him the value of the language he has been studying. *Five hours a week, one term. Open to all.*

Mr. _____.

34. **Commercial German Composition.**—*Prerequisite, 15 course hours of German.* Exercises in reading and writing commercial German. Study of German business forms and methods. *Five hours a week for two terms. Open to all.*

Mr. _____.

35. **French Institutions.**—Reading and conversation, based upon texts dealing with the commerce, geography and history of France, supplemented by lectures and lantern slides. *Five hours a week for two terms. Open to all.*

Professor BOWEN.

36. **Science of Language, Advanced Course.**—This course will take up more in detail the work of the second half term of course 32. The general rules there developed will be compared with those of the language the student has studied in his required course in this department, and these rules will be demonstrated in the study of Esperanto, which is a language without grammatical exception, and, therefore, well adapted to illustrate grammatical theory. Because of its rapid spread as an auxiliary language throughout the world, and its rapidly increasing use as a medium of recording and communicating scientific achievement, the language is well worth studying for its own sake. Some attention will also be given to semantics. This course is especially valuable to prospective teachers. *Five hours a week for two terms. Open to all.*

Professor BOWEN.

40. **European Literature.**—A brief course intended to acquaint the student with the leading writers in German, French, Spanish and Italian. Lectures, recitations and reports from students on work assigned. Translations will be used, and a knowledge of other languages than English, though desirable, is not required. *Two hours a week in class, six hours lectures and laboratory. Two terms. For Industrial Education Seniors. Open to all.* Professor BOWEN.
27. **German Literature.**—Lectures on the Early German Epic, the rise of the Drama in Germany, the Minnesingers, Meistergesang, Luther and the Reformation Period, Sturm und Drang, Goethe, Schiller, the Rise of Romanticism, etc., covering briefly the entire field of German Literature. Some of the time will be devoted to quizzes, some to library work, and some to rapid sight reading. *One term. Five credit hours. Open to all.* Professor BOWEN.
28. **French—Nineteenth Century Literature.**—Especial attention will be paid to the poetry and prose of Victor Hugo. *One term, five hours a week. Open to all.* Professor BOWEN.
29. **French Literature.**—A study of the principal movements in French Literature, with especial attention of the drama and the novel, classicism, romanticism, and realism. *One term, five credit hours. Open to all.* Professor BOWEN.
37. **Philology (Graduate Minor course).**—Advanced work in phonetics, morphology, and semantics. The student may specialize in either the Germanic or the Romance field. This course will be offered as a minor course leading to the degree of Master of Science, and students wishing to take it must have had at least two years of undergraduate work in the language in which they wish to specialize. The work will require one-third of the student's time for at least one year. *Informal. Hours to be arranged.* Professor BOWEN.
38. **Scientific Reading (Graduate Minor course).**—In exceptional cases, students who have had the equivalent of two years of undergraduate work will be given a course of reading in either Scientific German or Scientific French, on subjects bearing on the work of their major course. The work will require one-third of the student's time for at least one year. *Informal. Hours to be arranged.* Professor BOWEN.

MUSIC.

Mr. LEAKE.

The college band and orchestra consists of about forty men. They play at military formations, give frequent concerts, and are in demand for many more trips away from the college than it is possible to take. Last year they made a trip to Dallas, Texas, and this spring they went to Atlanta.

Students who already play an instrument are urged to enroll with the band. Those with musical talent, but no knowledge of any band instrument will be accepted, given private lessons, and finally enrolled as regular members of the band. Since this is of necessity individual instruction, a schedule can not be arranged. Those interested are requested to confer with the Director of Music.

PHILOSOPHY AND SOCIOLOGY.

Professor BRUNSON.

Associate Professor SNOW.

9. **Psychology.**—The laws of the mind are studied in their relation (1) to the physical organism; (2) to their logical issues in human conduct; and (3) to the rational interpretation of mental phenomena. The work is based upon the discussion of Angell, his views being thoroughly discussed and compared with those of Dewey, James., etc. The text is Angell's Psychology. James's larger work, and the works of Dewey, etc., are used as references. *Five hours per week for two terms. Required of the Pedagogical Sophomores.* Professor BRUNSON.
10. **The History of Education.**—The course deals with the rise and growth of educational theory as found in the records of the great nations that have held sway upon the earth; it traces the development of systems of education among the ancient nations, in the middle ages, and in the modern times; it shows the relation of these systems to the national ideal, their bearing upon each other; and seeks to point out their influence in shaping the educational practice of the present time. The text book is Monroe's A Brief Course in the History of Education. *Five hours per week, one term. Required of the Pedagogical Seniors.* Professor BRUNSON.

11. **The Educative Process.**—A study of the functions of education; of the acquisition of experience; of the functioning of experience; of the organization and recall of experience; of educational values; and of the transmission of experience and the technique of teaching. The text-book is Bagley's *The Educative Process*. *Five hours per week for one term. Required of the Pedagogical Juniors.* Professor BRUNSON.
12. **Class-Room Management.**—A consideration (1) of the routine factors of class room management, such as habit, starting right, mechanical devices, the daily program, attendance, hygienic conditions, order and discipline, penalties; (2) of judgment factors in class room management, such as attention, the technique of instruction, the "Batavia System," testing, disposition of the teacher's time, etc., etc. The text is Bagley's *Class Room Management*. *Five hours per week for one term. Required of the Pedagogical Juniors.* Professor BRUNSON.
13. **Sociology.**—This course will be based on a substantial text, and supplemented by references and lectures. It is designed to introduce students to the fundamental principles underlying the science of sociology, and to awaken them to a knowledge of the social forces and the principles of social well-being, with a view to making them socially efficient citizens. Special reference will be had to American, and particularly to Southern, conditions, past and present. *Required of Pedagogical Juniors. Third term.* Professor BRUNSON.
14. **Logic.**—A course is offered in both Deductive and Inductive Logic, a study of the best designed operations of the human mind in its search for truth; an acquaintance with common fallacies in thinking and reasoning. The course will be based on Creighton's *Introduction to Logic*. *Required of Pedagogical Seniors, second term.* Professor BRUNSON.
15. **Ethics.**—A carefully selected text will serve as the body of this course. It will be sought to develop the power, and to form the habit of inquiring into the ethical basis of conduct; the development of the will and conscience. *Required of Pedagogical Seniors, third term.* Professor BRUNSON.
16. **Rural and High Schools.**—This course is designed to deal with school conditions. It will include a treatment of many of the problems that the teachers of the state have met, are meeting, and will meet in the future. A text-book will be

used supplemented by such references as seem advisable. *Required of all Pedagogical Freshmen two hours per week, first, second, and third terms.* Associate Professor SNOW.

18. **The History of Educational Theory.**—This course will be a study of the writings and ideas advanced by the leading educational theorists of all the historic centuries. The following will be some of the characters to be studied in detail: For the Greek period, Socrates, Plato, and Aristotle; period of the revival of learning under Charles the Great, Alcuin, Rabanus Maurus; the Renaissance, Erasmus, and Roger Ascham; period of realistic education, Francis Bacon, Rabelais, Montaigne, and Comenius; period of disciplinary conception of education, John Locke; the naturalistic tendency in education, Rousseau; psychological tendency in education, Kant, Pestalozzi, Herbart, and Froebel; scientific tendency, Herbert Spencer; sociological tendency, Horace Mann. The method of this course will be lectures by the instructor, and reports by the members of the class upon assigned topics. *Elective. For Junior Pedagogical students, first, second and third terms, also open to graduate and Special students in Education.* Professor BRUNSON.

19. **The History of Education in the United States.**—This will be a lecture and text-book course. Special reference will be had to developments in public education in Mississippi. Present tendencies in education in the United States will receive careful attention, especially with reference to vocational and industrial education in various commonwealths. *Elective for Pedagogical Seniors, first term. Also open to graduate and Special students in Education.* Professor BRUNSON.

20. **A Study of the Educational Systems of the Leading Foreign States of the World.**—This will include a detailed study of the school system of the German Empire; of France; Switzerland; and of the Japanese Empire. Special attention will be directed to vocational and industrial training in the several states named. The method will be lectures by the instructor and reports on assigned topics by the members of the class. *Elective for Pedagogical Seniors, second and third terms. Also open to graduate and Special students in Education.*

Professor BRUNSON.

OUTLINE OF POST-GRADUATE COURSES.

Advanced course in Psychology; course in Educational Psychology; study of the development of the child mind with reference to the periods in child development.

Advanced course in the History of Education, both Ancient and Modern; History of Education in the United States; History of Education and the Development of the School System in Mississippi; Comparative study of State School Systems in the Leading States of the World, and of the Commonwealths of the United States.

Course in School Administration; Present Tendencies in Education.

Advanced course in Sociology; An Inquiry into the Local Sociological Problems of the United States; the Sociological Aspect of Education.

Elective work will be offered senior students in Industrial Education in the following departments. (See the respective department statements for detail):

Agriculture.

Chemistry.

Industrial Education.

History and Civics.

Mechanical Engineering.

Modern Languages.

Zoology.

PHYSICS.

Professor PATTERSON. *

Assistant Professor McMURTRAY.

5. **Elementary Physics.**—This course covers the subjects of mechanics, heat, sound, light, electricity, and magnetism from a standpoint of general information, stressing such parts as are of practical importance to agricultural students. It consists of lectures, accompanied by demonstrations, recita-

* Succeeded by Dr. Moody.

tions, and practical problems. *Three hours per week during second and third terms. Required of Agricultural Freshmen.*

Professor MCMURTRAY.

6. **Elementary Physical Laboratory.**—Laboratory course accompanying course 5 and *required of those taking that course.* The laboratory work consists of about twenty experiments, embracing accurate measurements, proofs of important laws of mechanics, with some experiments in sound and heat. *Two hours per week, during second and third terms. Required of Agricultural Freshmen.*

Professors PATTERSON and MCMURTRAY.

7. **General Physics.**—This course is a more advanced treatment of mechanics, heat, sound, light, electricity and magnetism and is suited to the needs of those students not taking the subject as preparatory to engineering work but as a more general scientific training. It consists of lectures, demonstrations, lantern illustrations, recitations, and problems, without special stress on any one subdivision. *Five hours per week during first and second terms. Required of all Sophomores in General Science and Industrial Education Schools. Prerequisite, Freshman Mathematics.*

Professors PATTERSON and MCMURTRAY.

8. **General Physical Laboratory.**—Practical course accompanying course 7, and *required of all those taking that course.* The laboratory work follows the theoretical as explanation and proof, and consists of about forty experiments in mechanics, heat, sound, light, and electricity. *Four hours per week during first and second terms.*

Professors PATTERSON and MCMURTRAY.

9. **Engineering Physics.**—This course provides a full year's work in college physics for Engineering students. Since physics is the parent subject of all engineering branches, which necessarily are dependent upon a thorough knowledge of the parent subject and which are no more than physical laws put into practical application, it is absolutely essential to have a clear understanding of physical phenomena and the laws which govern them, before taking up the more technical and highly specialized subdivisions of engineering. The theoretical work consists of lectures illustrated by experiments performed before the class, lantern illustrations, recitations, and solution of problems not only in text but from outside sources.

The interest of the student is sustained by making the illustrations and problems as practical as possible. The time allotted to each of the subdivisions is so adjusted that the student may become proficient in the subjects most adaptable to the engineering professions. Mechanics and heat are taught for one and a half terms; sound and light for one half term; and electricity and magnetism for one term. *Five hours per week throughout the year. Required of Engineering Sophomores. Prerequisite: Freshman Mathematics.*

Professor PATTERSON.

10. **Experimental Physics.**—Laboratory course accompanying course 9. This course follows closely the theoretical work and consists of about sixty experiments intended to give practice in the use of standard apparatus and training in making physical measurements. Special stress is laid on the subject of mechanics, thus giving the student a practical knowledge of the application of the laws of mechanics to engineering. In addition, there are experiments in calorimetry, thermometer calibration, expansion, photometry of the various types of modern illuminants, laws of lenses and mirrors, measuring wave length of light, velocity and wave length of sound, and verifying the important laws of electricity and magnetism, with practice in making delicate electrical measurements. *Four hours per week throughout the year. Required of Engineering Sophomores.*

Professors PATTERSON and MCMURTRAY.

Equipment.—The Physics Department occupies the whole south end of the second floor of the Engineering building, consisting of office, two large lecture rooms, store rooms, large well lighted general laboratory, small laboratory for special work, and several dark rooms for photometric work and other experiments in optics. The equipment both for theoretical and experimental work is thoroughly modern. The apparatus has been purchased to fit the course from a practical standpoint and additions are being made constantly. The lecture rooms are equipped with dark shades and projection apparatus for optical demonstrations as well as for lantern slides and opaque projection. Lantern illustrations are made a feature of

the work. The lecture tables have connections for water, gas, and electricity. The department is well supplied with lecture room apparatus for demonstration purposes and the instrumental equipment is now such that great stress is laid on individual laboratory work. Multiple sets of apparatus permit laboratory experiments to be run more nearly parallel to the lectures and recitations, thus strengthening the instruction on both sides. Store rooms are conveniently located and students are encouraged to become familiar with the use of all apparatus. The department has a complete photographic outfit recently installed. It consists of cameras ranging in size from those for pocket use up to 8x10 view cameras, apparatus for enlarging pictures and for making lantern slides. The necessary dark rooms are fully equipped for developing and printing and students are encouraged to use this equipment until they become familiar with practical photographic materials and methods.

PLANT DISEASES.

See Botany and Forestry.

POLITICAL ECONOMY.

See History and Civics.

POULTRY HUSBANDRY.

Professor CLAYTON.

The purpose of the Poultry Department is two-fold, in that it is both instructional and experimental.

The courses outlined and offered to students are such as will materially help them in the care and management of this branch of live stock and aid in the detection, treatment, and prevention of the more common diseases to which fowls are subject. Instruction consists of lectures

and text-books supplemented by practical work in incubation, brooding, construction of labor-saving poultry appliances, and general management.

Various experiments with poultry are conducted during the entire year. Students who elect this course are expected to familiarize themselves with the methods, plans, purposes, and results of such work.

1. Poultry Keeping.—This course, consisting of lectures only, is intended to bring the student's attention to the more important principles of housing, rearing, feeding, breeding, and marketing poultry. *One term, two hours per week, laboratory. Required of all Agricultural Freshmen.*

2. Poultry Culture.—This course takes up more fully all the phases of poultry husbandry mentioned above and in addition, origin and description of breeds, methods of mating, parasitism, trap nesting, caponizing, scoring and judging, and experimental work with poultry. *Three hours per week theoretical and two hours per week practical, the third term of the Junior year.*

Equipment.—The poultry plant is provided with a model brooder house 16 x 110 feet, equipped with individual brooders. There are ten spacious colony houses, a feed room, work shop, incubator cellar, and many kinds of poultry apparatus. Live stock consists of ducks, geese, and several hundred fowls of different breeds and varieties.

PSYCHOLOGY.

See Philosophy and Sociology.

PUBLIC DISCOURSE.

Professor MELLEN.

The Department of Public Discourse places emphasis on applied composition, oral and written. The purpose is to train students in interpretation and in the expression of ideas from the rostrum and through the press. Incidentally it offers instruction to those students who are interested in

the literary societies of various kinds and in vocational clubs. The courses are designed to assist the student in becoming a leader in the public activities of his home county and of the state at large. They encourage the dissemination of agricultural and other vocational knowledge through student debates, publications, and so on; carrying knowledge direct from the student to the home community. To accomplish these objects the following courses are offered,—others will be announced as demand requires:

10. **Vocational Writing.**—The purpose of this course is to train students in the expression of industrial knowledge through the press. The class work will consequently include discussion of current questions, especially those of distinctive interest to Agricultural, Engineering, Industrial Education, and General Science students. The course will require the writing of articles suitable for publication in college or in state papers. *Three hours a week in class; four in laboratory; first term. Open to Juniors and Seniors of every School.*
11. **Interpretative Reading.**—The object of this course is to train students to read with sincerity, feeling, and effectiveness. In order that the course may bear closely on daily and on professional life, the selections for practice are chosen from agricultural, engineering, and other vocational publications and from popular classics. The course is adapted primarily to the needs of those students who expect to be leaders in elementary education or in business life. *Three hours in class; four in laboratory; first term. Open to Juniors and Seniors of every School.*
12. **Public Writing.**—This course is more advanced than 10. In addition to discussion of live subjects, it considers technical and popular needs and interests. It requires the gathering of information and news. In writing his articles the student is encouraged to remember the reader, to work for a given effect. Instruction in proof-reading is given. *Three hours a week in class, four in laboratory, second term. Open to Juniors and Seniors of every School.*
13. **General Speaking.**—This course embraces the needs of students in all kinds of professional work. It assists in the preparation of general addresses, nominations, introductions,

platform lectures, and other forms of address frequently required of the industrial leader. Instruction in the organization and management of meetings is given. This course takes the place of Industrial Education 22. *Three hours a week in class, four in laboratory, second term. Required of all Industrial Education Seniors; open to all other Seniors.*

14. Debate.—This course is an extension of 13 into a definite field. Students contemplating taking this course are urged to study that course. The work is very practical; impromptu as well as prepared arguments are required. Some attention is given to parliamentary usages. Members of the literary societies or of the technical clubs and students definitely preparing for vocational leadership will find the course helpful. *Three hours a week in class, four in laboratory, third term. Open to Juniors and Senior of every school.*

15. Persuasion.—Students who expect to take this course are urged to study 13. The course gives sufficient training to enable the student to compete advantageously in various oratorical contests. Its principal purpose, however, is to assist the industrial leader to convince his audience by means of solid thought expressed sincerely. *Three hours a week in class, four in laboratory, third term. Open to Juniors and Seniors of every School.*

16. Public Discourse for Elementary Schools.—This course aims to give sufficient information to enable the student to direct courses in Public Writing and Public Speaking in the grammar or high school. Its object is therefore two-fold: (a) to assist the teacher as a leader, and (b) to promote public discourse among the many who have only slight opportunity of attending college. *Three hours a week in class, four in laboratory, third term. Open to Juniors and Seniors of every School. (To be given in case demand is great.)*

RURAL ENGINEERING.

See Agricultural Engineering.

SOIL PHYSICS.

See Agronomy.

SPANISH.

See Modern Languages.

SURVEYING.

See Civil Engineering, and Drawing, and Rural Engineering.

VETERINARY MEDICINE.

Professor RANCK.

This course is designed as an adjunct to the agricultural department of the college. Its aim is to instruct students in the care and management of live stock, with particular reference to the examination of animals for soundness, characteristic lameness of different farm animals, horse shoeing in a theoretical manner, elementary comparative anatomy, physiology, pathology, and therapeutics of such practical nature that it can be applied on the southern farm.

It is further intended to teach students the practical application of quarantine and preventive measures in stamping out such diseases as tick fever, charbon (anthrax), black-leg (symptomatic anthrax), glanders, tuberculosis and other diseases that handicap the raising of live stock. They are given instructions in the use of anti-hog-cholera serum, and taught the adopted method of preventive treatment.

They are instructed in the various methods of detecting the common troubles attending the breeding and raising live stock, including an elective course in elementary embryology and obstetrics, in order to assist them in following this branch of work.

The students in this department are in constant contact with the reports of infectious diseases of animals over the state, as the professor of this branch is also State Veterinarian and directs the work of the State Live Stock Sanitary Board along these lines.

It is not our object to turn out professional veterinarians, as it would be impractical with the time, equipment and teaching force allotted to the department. Students desiring to study veterinary medicine as a profession should graduate from our agricultural college, if they can spare the time and means, and then graduate from a regularly recognized veterinary college. Graduates from this school are admitted to advanced standing in veterinary colleges according to the curriculum of the several schools teaching this branch.

8. **Veterinary Anatomy and Physiology and Examination for Soundness.**—*Four hours per week lecture room, and two hours per week, clinic. First term. For Agricultural Juniors.*
9. **Materia Medica and Therapeutics.**—*Five hours per week lecture room, and two hours per week, clinics. Second term. For Agricultural Seniors (elective).*
10. **Theory and Practice and Surgical Clinics.**—*Five hours per week lecture room. Four hours per week, surgical clinics, including hog-cholera inoculation, and obstetrics. Third term. Agricultural Seniors (elective).*
11. **Veterinary Embryology and Obstetrics.**—*Three hours per week lecture room. One or two hours per week practical work at clinics. Second or third term. For Agricultural Seniors (elective).*
12. **Elementary Anatomy and Physiology and Examination for Soundness.**—*Three hours per week lecture room, and two hours per week clinics. For first term, first year Agricultural students taking the Two Year course.*
13. **Elementary Course in Animal Diseases.**—*Three hours per week lecture room, and two hours per week clinics. For second term, second year Agricultural students taking the Two Year course.*

WOODWORK.

See Mechanical Engineering.

ZOOLOGY AND ENTOMOLOGY.

Professor HARNED.

Assistant Professor LOBDELL.

Mr. STAFFORD.

8. **Special Entomology.**—In this course the work is arranged to suit the needs and attainments of each individual student. Special lectures may be given and assigned readings will constitute a considerable part of the work, but this is supposed to be primarily a laboratory and field course. Any phase of entomological work may be taken up at this time. The insectary may be used for the life history work and the photograph gallery and department library are at the disposal of students prepared to use them. Both oral and written discussions of the work undertaken will be required from time to time. Hours and credits to be arranged individually. A student may elect any amount of time he desires in this course if it is acceptable to the head of the department. Laboratories are open daily from 8:00 A. M. to 5:30 P. M. Credit may be obtained for work done here during the summer. *Three terms. This course is designed particularly for Agricultural Seniors and General Science Juniors and Seniors electing entomology, but is open to all students desiring to take special work in this department to prepare themselves for entomological work or teaching.* Professor HARNED and Mr. STAFFORD.

9. **Graduate Work.**—Graduates of this or other colleges may take up any line of investigation or research work in this department. Candidates for the Master's degree may take either the major or minor work. The work is arranged as in course 8. Laboratories open from 8:00 A. M. to 5:30 P. M. *Three terms and during summer.* Professor HARNED.

10. **Introduction to Zoology.**—This is an elementary introductory course that is designed to give the student a general idea of Zoology and Entomology. Special attention is given to the physiology of animals, to the relation of animals to each other and to man, and to the control of insect pests. The practical work will be devoted to insect pests. Trips to the gardens, orchards and fields will occupy most of the laboratory periods. At other times lantern slides will be used. Text-book: Kellogg's *The Animals and Man*. *Three hours a week recitation, and two hours a week in the laboratory and field.*

*Required of all students in the Two Year course in Agriculture.
Open to all students.*

Assistant Professor LOBDELL and Professor HARNED.

13. Apiculture.—This course is designed to give the student a general knowledge of the anatomy and natural history of the honey bee as well as a practical knowledge of apiary methods, honey production, and related topics. Lectures, recitations, library, laboratory, and field work. *Five course hours, third term. Open to all students as an elective.* Professor HARNED.

15. General Zoology.—A general course covering all the branches of animals. The student becomes acquainted with the more important economic species of each branch. It is designed to give a general introduction to Zoology. Special attention is given to animals of economic importance. Text-book: Daugherty's Principles of Economic Zoology. *Four hours a week recitation, and two hours a week in the laboratory. Required of all Agricultural and General Science Sophomores. Open to all students.*

Assistant Professor LOBDELL and Mr. STAFFORD.

16. General Zoology.—This course is very similar to course 15, but is more elementary. Text-book: Herrick's Text-book in General Zoology. *Four hours a week recitation and two hours a week in the laboratory and field. Required of all students in the Two Year course in Agriculture.*

Assistant Professor LOBDELL and Professor HARNED.

18. General Entomology.—This is a general course dealing principally with the characteristics of the different orders, sub-orders and important families of insects and with the habits and life histories of representative important economic species. About equal attention is given to the morphologic, systematic, and economic side of the work. *Two hours a week recitation and four hours a week in the laboratory. Required of Agricultural Juniors and General Science Sophomores; offered to all students prepared to take the work.*

Professor HARNED, Assistant Professor LOBDELL,
and Mr. STAFFORD.

19. General Entomology.—A continuation of course 18. *Two hours a week recitation and four hours in the laboratory and field. Required of Agricultural Juniors and General Science Sophomores.* Professor HARNED, Assistant Professor LOBDELL,
and Mr. STAFFORD.

20. **General Entomology.**—A continuation of courses 18 and 19. *Two hours a week recitation and four hours in the laboratory and field. Required of Agricultural Seniors. Offered to all students who have completed courses 18 and 19.*

Professor HARNED, Assistant Professor LOBDELL,
and Mr. STAFFORD.

21. **Economic Entomology.**—In this course the life histories, habits, and methods of controlling the principal insect pests of field, garden and orchard crops are studied. *Five hours a week for one term. This course is designed particularly for Agricultural specializing Seniors in the Agronomy and Horticultural departments, but is open to all students prepared to take the work.*

Professor HARNED.

22. **Advanced General Entomology.**—Special attention is given to the structures of insects and their functions and to the biological aspects of entomology. *Prerequisites, courses, 15, 18, 19, and 20, or their equivalent. Five hours, winter term.*

Professor HARNED.

23. **Invertebrate Zoology.**—A general course dealing with the morphology, reproduction, physiology, classification, habits, life history, geographical distribution, and economic importance of invertebrate forms. *Prerequisite, course 15, or equivalent. Seven hours for one term.*

24. **Vertebrate Zoology.**—A general course similar to that described in course 23, but dealing with vertebrate forms. *Prerequisites, courses 15 and 23 or equivalents. Seven hours for one term.*

Summer Courses.—While no regular work is offered during the summer, the laboratories are open during the entire year and the department staff will always be glad to assist any students who wish to take special work during vacations. Teachers sometimes avail themselves of this opportunity of better preparing themselves for teaching zoology and entomology. Credit may be obtained for summer work.

WORKING BOYS' COURSE.

Industrial Course B, commonly called the "Working Boys' Course," is intended to provide a way for worthy young men to come to college and pay all their expenses by their labor. The members of this course do ordinary farm work during the day, for which they are paid wages ranging from \$20 to \$25 per month and attend classes at night. They are thus able to pay all their expenses and, at the same time, to make considerable progress in their studies. Some members of the "Working Boys' Course" each year have saved enough money to enter regularly the following year, and while so doing have prepared themselves to meet the entrance requirements for the freshman class. Members of this course room in the dormitory, have their meals in the mess hall, and are subject to the college discipline, as are other students.

To enter this course one must be not less than eighteen years old, able and willing to do ordinary manual labor, and must present a certificate of good character signed by two reputable citizens of his home community. Applicants are cautioned not to come to college expecting to enter the "Working Boys' Course" without first obtaining assurance from the president of the college that they will be admitted.

For further particulars of the subjects taught, see "Industrial Course B", under the School of Industrial Education, page 68.

DIVISION OF COLLEGE EXTENSION.

EXTENSION STAFF.

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| R. H. PATE..... | Director, Division College Extension. |
| ARCHIBALD SMITH..... | Animal Husbandry. |
| E. R. LLOYD..... | Director Experiment Stations. |
| T. J. BROOKS..... | Professor of Markets and Rural Economics. |
| C. T. AMES..... | Holly Springs Branch Station. |
| G. B. WALKER..... | Stoneville Branch Station. |
| E. B. FERRIS..... | McNeill Branch Station. |
| C. A. COBB..... | Boys' and Girls' Clubs. |
| D. SCOATES..... | Agricultural Engineering. |
| J. C. ROBERT..... | Agronomist. |
| HUGH CRITZ..... | Associate Agronomist. |
| J. R. RICKS..... | Station Agronomist. |
| E. C. EWING..... | Cotton Specialist. |
| R. W. HARNED..... | Entomologist. |
| H. B. BROWN..... | Botanist. |
| J. M. BEAL..... | Botanist. |
| J. S. MOORE..... | Dairy Husbandman. |
| C. F. BRISCOE..... | Bacteriologist. |
| W. F. HAND..... | State Chemist. |
| E. M. RANCK..... | State Veterinarian. |
| A. B. McKAY..... | Horticulturist. |
| E. P. CLAYTON..... | Poultryman. |
| W. L. BLEECKER..... | Dairy Husbandry and Silo Construction. |
| L. A. HIGGINS..... | Assistant in Same. |
| I. W. CARPENTER..... | Live Stock Extension. |
| C. B. HADDEN..... | Assistant Animal Husbandry. |
| J. F. McKAY..... | Market Extension. |
| A. G. HALL, Drainage Engineer, U. S. Govt., co-operating with the College. | |

In addition to the above named force, Farmers' Institute specialists are employed for the regular institute season.

The principal value of the agricultural college as a teaching factor must be found in the training it is able to give to the students who take its courses of study. The Experiment Stations are a strong adjunct to the college and have their greatest field in the finding of new truths

relating to agriculture; but so long as the institution limits its efforts to these lines, it is evident that only a small proportion of the people of our state can derive direct and practical benefits from the work of the college. The progress of agricultural education would be entirely too slow if the agricultural college did not offer other forms of instruction to the people of the state. The economic principle justifying the expenditure of public funds for educating those who are able to attend the college justifies also a similar expenditure for the purpose of taking the college to those who cannot attend it. There is a wide-spread demand that something be done to help the present farmer,—the man with the hoe, the man behind the plow. He has paid a large share of the vast outlay that has been expended in the last fifty years in gathering agricultural knowledge. The work was undertaken primarily for him and through him for the benefit of everyone. He has a right to expect and demand that the results shall be delivered to him in a way and form helpful to him. He cannot go to the college for these benefits, hence they must be taken to him. State education is not philanthropy, but a sure self-protection. "An educated citizenship is a prosperous citizenship."

Until the year 1911, the work of college extension, largely in the form of farmers' institutes, was done by the regular members of the college faculty during the summer season. In January, 1911, a division of College Extension was created with a regular staff of institute conductors and extension workers put in the field for full time. In addition to this force regular members of the faculty and directors of the four experiment stations have rendered especial aid in various forms of college extension. The many developments growing out of the extension work, the increased state appropriation for farmers' institutes, the recent passage of the Smith-Lever bill, providing special aid from the U. S. Department of Agriculture in college extension, make it possible for a broadening of the scope of college

extension. The Department of Extension for the years of 1914 and 1915, will consist of five divisions: The Department of Farmers' Institutes and Demonstrations, the Department of Agricultural Engineering, the Department of Animal Husbandry, the Department of Boys' and Girls' Clubs, and the Department of Farmers' Clubs and Market Extension.

The Agricultural and Mechanical College conducted meetings during the year 1913-14 with an aggregate attendance of 160,000 people, and did a considerable quantity of practical extension work. While this has been accomplished under the direction of College Extension, the scope would have been much limited without the aid and co-operation of the other divisions and departments of the college.

BOYS' AND GIRLS' CLUBS.

In order to create a keener interest in country life and to impart valuable lessons to both young and old, boys' and girls' clubs have been organized throughout the state. These clubs are having a decidedly beneficial effect on the country life of Mississippi. Prof. C. A. Cobb, at the head of Corn Club Work for Boys, has accomplished great things during the past year and the work is gradually strengthening. About 4,000 boys are enrolled in these clubs, many of them producing last year over 100 bushels of corn per acre. As a stimulus to the boys in these clubs valuable prizes are given by the fairs, by the bankers of the state, by the several counties, and by the college at the Round-Up Institute. These prizes are quite an incentive to the boys to excel, and one boy produced 214 2-7 bushels last year on a single acre. The Girls' Club Work, conducted by Miss Susie V. Powell, has proven as great a success as the Boys' Clubs. About 3,000 girls were enrolled last year. The Girls' Club Work under the efficient management of Miss Powell, has expanded until it embraces not only the art of canning, but also home economics, poultry raising, etc., and is reaching and

blessing many homes in the remotest rural districts. It would be difficult to over-estimate the far-reaching effect of the boys' and girls' clubs. The idea of an acre of corn and a pig for each boy and a tomato plat and a dozen chickens for each girl is more than a mere dream and will hasten the fulfilment of the meaning of Mississippi's new motto: "Grown in Mississippi."

FARMERS' INSTITUTES AND DEMONSTRATIONS.

Farmers' Institutes are being organized throughout the state, through which we do our regular institute work. Speakers are sent to these organizations to present well defined lessons in some branch of agriculture. Live stock, forage crops, legumes, soil fertility, tiling, terracing, diversification, seed selection, silos, cultivation of crops, etc., are themes for regular institutes. In addition to these each local meeting is thrown open for questions which not infrequently constitute the most important feature of the program.

DEMONSTRATION FARMING.

After speakers from the institute department have attended meetings and discussed farm problems, requests come in from farmers asking the college to send men into those communities and put into practical test the many things advocated in the institute. This gives rise to the various field demonstrations, including pruning and spraying of orchards, the spraying of field crops, the building of silos, inspection of dairy herds, making plans for dairy barns, seed selection in the field, the digging of the ditch and laying of tiling, the construction of terraces and visiting of farmers to advise them as to farm management, etc.

RURAL ENGINEERING.

Agricultural Engineering is, perhaps, the most needed form of practical extension. Millions of acres of Mississippi's most fertile soil is practically worthless because of poor

drainage. To aid our farmers in toning up these soggy lands to a high state of productiveness will be of inestimable value to Mississippi. To encourage the work of soil reclamation and farm improvement the rural engineering department will furnish estimates for canals, will instruct and assist the farmers in laying tiling, terracing their land, in building silos, model barns, and poultry houses, and will furnish blue prints and specifications for farm buildings. The college cannot do a better work than to assist the farmers along these practical business lines.

LIVE STOCK EXTENSION.

The live stock business is of paramount importance to Mississippi. Our state will, in the near future, be one of the leading live stock states of the Union. Live stock "grown in Mississippi" means millions of dollars to offset the boll weevil, but the live stock business requires a general knowledge of the subject. Since the experiment stations have conducted such large breeding and feeding experiments in cattle, mules, horses, hogs and in poultry raising, the college is in position to give a very much needed assistance to the farmers along these lines. Prof. Archibald Smith, who has charge of this form of extension, will assist the farmers in purchasing pure-bred breeding animals, in the organization of cooperative live stock associations, and will cooperate with them in feeding their herds under station directions, and will assist them in the marketing of same.

AGRICULTURAL TRAINS.

The college enjoys a close cooperation with the leading railroads in Mississippi in the conducting of special institute trains. These trains have been furnished and operated by the railroads at their expense, making it possible for the college to do a line of extension work otherwise impossible. These trains are highly educational in their make-up, consisting of beef and dairy cattle, horses, mules, hogs, poultry,

silos, dairy equipment, miniature model barns, etc., and are accompanied by the best lecturers available. Great crowds have greeted these trains along their respective lines, with a total attendance of 40,000 people. With continued co-operation on the part of the railroads, these trains will be operated extensively during the years 1914-'15. There is no more effective way and none so quick to reach the greatest number of people.

FAIRS.

It has been the custom of the college for a number of years to furnish an educational exhibit for the state fairs. These exhibits are unique and instructive, representing the different departments of the college and its extension work. The state fair exhibit relates to agriculture, home economics, dairying, manual training, engineering, etc., and consists of charts, photographs, maps, agricultural products, mechanical arts, and other illustrated material showing agricultural experiments and giving other agricultural and economic information. A competent corps of extension workers accompany these exhibits to give desired information to the multitudes attending these fairs. The extension department also sends representatives to the various county fairs to judge their agricultural exhibits, live stock, etc., and to address the people on agricultural questions.

EXPERIMENT STATION.

STATION STAFF.

| | |
|----------------------|--|
| G. R. HIGHTOWER..... | President of the College. |
| E. R. LLOYD..... | Director and Animal Husbandman. |
| W. F. HAND..... | Chemist. |
| W. N. LOGAN..... | Geologist. |
| J. S. MOORE..... | Dairy Husbandman. |
| R. W. HARNED..... | Entomologist. |
| DANIELS SCOATES..... | Agricultural Engineer. |
| H. B. BROWN..... | Botanist. |
| E. M. RANCK..... | Veterinarian. |
| J. R. RICKS..... | Agonomist. |
| C. F. BRISCOE..... | Bacteriologist. |
| E. C. EWING..... | Cotton Breeding. |
| A. SMITH..... | In Charge of Beef Cattle Investigations. |
| R. N. LOBDELL..... | Assistant Entomologist. |
| J. M. BEAL..... | Assistant Botanist. |
| MISS SIDNEY GAY..... | Stenographer. |
| E. B. FERRIS..... | Assistant Director, McNeill Station. |
| C. T. AMES..... | Assistant Director, Holly Springs Station. |
| G. B. WALKER..... | Assistant Director, Delta Station. |

Four experiment stations are established in Mississippi for conducting investigations in agriculture. The oldest of these is located at the college; one is located at McNeill, in Pearl River county; one at Holly Springs, in Marshall county; and one at Stoneville, Washington county. Located as they are, these stations furnish facilities for conducting experiments, the results of which will be directly applicable to the various soils and climatic conditions that obtain in the state. The college station deals with soils and the conditions obtaining in the eastern part of the state; the McNeill station, with the pine-woods area in the southern part; the Holly Springs station deals with the problems of the brown loam area; and the Delta station with the delta soils and problems.

The results obtained by the stations are published in a series of bulletins and circulars which are sent to those wishing them free of cost. These publications contain useful information concerning soils and fertilizers, live stock and feeds, rotations and restorative crops, grasses and forage plants, field and garden crops, diseases of plants and animals, injurious insects, and similar important matters pertaining to agriculture.

Soils.—Experiments dealing with tillage, rotation, drainage, and fertilizer problems are made at all four stations. Three of the stations deal with upland drainage, or terracing to prevent surface washing, and at Holly Springs this becomes an exceedingly important piece of work. Experiments with fertilizers are of prime importance at Holly Springs, but more especially at McNeill.

Live Stock.—For their work of investigation the stations have brood mares, beef cattle, dairy cattle, and hogs.

Field Crops.—Such standard crops as cotton, corn cowpeas, oats, and potatoes, are grown at all of the stations, as well as many others that may be used for improving soils, and as feed for live stock.

Grasses and Clover.—A great variety of grasses and clovers are grown each year for hay, forage, and pasture purposes. Such valuable plants as alfalfa, Johnson grass, lespedeza, melilotus, Bermuda, vetch, and soy beans are used regularly, while proper tests are made with many other grasses and clovers.

Garden Crops.—Information concerning the most important garden crops is obtained through the medium of experiments, and the list of plants grown comprises the most important crops for the home garden, as well as those usually grown by truck farmers.

Orchard Crops.—Peaches, plums, apples, pears, and pecans are grown. Besides commercial orchards at each station, many varieties are tested.

Insects.—The station entomologist studies, in a systematic way, the life histories of some of the most important injurious insects, including the Mexican cotton boll weevil. Insects injurious to live stock receive attention, as well as those injurious to plants.

Diseases of Animals.—The most commonly occurring diseases of animals are studied by the veterinarian, special attention being given to southern cattle fever and black leg.

Dairying.—The station dairyman regularly gives attention to such problems as arise in the handling of milk and its products, and the management and care of a herd of dairy cattle.

While the work of the stations is intended primarily to be helpful to the farmers of the state, still the students attending college have access to the experiments made at the college station and to the results obtained at all the stations. The results are also used by the professors and instructors in the class rooms.

THE MILITARY ORGANIZATION.

G. R. HIGHTOWER, President, Head of the Military Department.
Colonel S. W. ANDING, First Lieutenant, Unassigned, U. S. Army ,
Commandant.

THE REGIMENT.

J. N. BRIEN, Cadet Lieutenant Colonel, Commanding Corps of
Cadets.

REGIMENTAL FIELD STAFF AND NON-COMMISSIONED STAFF.

| | |
|-------------------|-------------------------------------|
| J. N. BRIEN..... | Cadet Lieutenant Colonel. |
| G. W. WINGO..... | Cadet Captain and Adjutant. |
| W. M. BYNUM..... | Cadet Captain and Quartermaster. |
| R. I. GARMON..... | Cadet Captain and Ordnance Officer. |
| J. B. BURNS..... | Cadet Captain and Commissary. |
| H. H. LEGETT..... | Cadet Regimental Sergeant Major. |
| S. R. DEEN..... | Cadet Ordnance Sergeant. |
| R. THOMPSON..... | Cadet Color Sergeant. |
| T. THOMPSON..... | Cadet Color Sergeant. |

BAND, DRUM AND BUGLE CORPS.

| | |
|-----------------------|--------------------------|
| Mr. CARL LEAKE..... | Director of the Band. |
| | Cadet Captain. |
| J. G. MASON..... | Cadet First Lieutenant. |
| D. A. McCANDLISS..... | Cadet Second Lieutenant. |
| H. H. NAFF..... | Cadet Drum Major. |

CADET SERGEANT.

F. S. Francis.

CADET CORPORALS.

| | | |
|---------------|------------------|-----------------|
| D. B. Merkel, | F. H. Willemain, | C. L. Harrison. |
|---------------|------------------|-----------------|

FIRST BATTALION.

| | |
|---------------------|---|
| R. P. White..... | Cadet Major. |
| J. O. Carraway..... | Cadet First Lieutenant and Bat- talion Adjutant. |
| J. M. Heard..... | Cadet Second Lieutenant and Battalion Quartermaster. |
| J. C. Holton..... | Cadet Battalion Sergeant Major. |

Company "A":

| | |
|-------------------|--------------------------|
| _____ | Cadet Captain. |
| E. D. Goza_____ | Cadet First Lieutenant. |
| J. L. Bolton_____ | Cadet Second Lieutenant. |
| G. A. Hogg_____ | Cadet First Sergeant. |

CADET SERGEANTS.

S. M. Thomas, A. D. Suttle, W. Gernon.

CADET CORPORALS.

J. R. Hamilton, H. H. Lawley, W. C. Parker,
H. Loper, J. T. McAllister.

Company "B":

| | |
|--------------------|--------------------------|
| F. W. Walker..... | Cadet Captain. |
| G. W. Bullock..... | Cadet First Lieutenant. |
| F. A. Rew..... | Cadet Second Lieutenant. |
| W. C. Dunn..... | Cadet First Sergeant. |

CADET SERGEANTS.

G. W. Bacot, N. S. Adams, E. E. Deen,
D. M. McCarty.

CADET CORPORALS.

| | | |
|------------------|----------------|---------------|
| L. P. Bernhardt, | B. C. Conger, | R. H. Donald, |
| A. G. Hamilton, | E. L. Hobby, | V. N. Jones, |
| G. B. Kimball, | John M. Moose. | |

Company "C":

| | |
|--------------------|--------------------------|
| E. F. White..... | Cadet Captain. |
| N. F. Hanson..... | Cadet First Lieutenant. |
| H. C. Kinney..... | Cadet Second Lieutenant. |
| O. D. Varnado..... | Cadet First Sergeant. |

CADET SERGEANTS.

| | | |
|-----------------|----------------|-----------------|
| W. Roseborough, | C. L. Dillard, | O. A. Cozzani, |
| D. E. Allen, | E. F. Hinton, | C. L. Anderson. |

CADET CORPORALS.

C. Smith, W. T. Coke.

Company "D":

| | |
|--------------------|--------------------------|
| C. B. Nelson..... | Cadet Captain. |
| E. C. Lindsey..... | Cadet First Lieutenant. |
| J. T. Rogers..... | Cadet Second Lieutenant. |
| S. K. Nethery..... | Cadet First Sergeant. |

CADET SERGEANTS.

| | | |
|----------------|-----------------|-----------------|
| G. M. Freeman, | J. R. Anderson, | C. Winters, |
| W. E. Steen, | | T. M. Robinson. |

CADET CORPORALS.

| | | |
|--------------------|----------------|-------------|
| W. E. H. Anderson, | A. M. Stigler, | L. H. Gray, |
| | W. A. Enochs. | |

SECOND BATTALION.

| | |
|-----------------------|--|
| T. I. Cook..... | Cadet Major. |
| L. A. Willis..... | Cadet First Lieutenant and Bat- talion Adjutant. |
| R. M. Dickey..... | Cadet Second Lieutenant and Battalion Quartermaster, and Commissary. |
| L. C. McWilliams..... | Cadet Battalion Sergeant Major. |

Company "E":

| | |
|-----------------------|--------------------------|
| M. M. Bedenbough..... | Cadet Captain. |
| W. A. Arnold..... | Cadet First Lieutenant. |
| J. G. Watson..... | Cadet Second Lieutenant. |
| J. C. Scott..... | Cadet First Sergeant. |

CADET SERGEANTS.

| | | |
|-----------------|------------------|---------------|
| E. Cobb, | H. A. McPherson, | D. N. Barron, |
| H. G. Grantham, | | R. E. Lewis. |

CADET CORPORALS.

| | | |
|-----------------|----------------|-----------------|
| E. L. Brien, | A. E. Bonelli, | T. H. Cutrer, |
| W. E. Anderson, | | W. B. Mayfield. |

Company "F":

| | |
|--------------------|--------------------------|
| J. C. McCarty..... | Cadet Captain. |
| J. N. Robbins..... | Cadet First Lieutenant. |
| R. Ruffin..... | Cadet Second Lieutenant. |
| C. T. Bullock..... | Cadet First Sergeant. |

CADET SERGEANTS.

| | | |
|---------------|---------------|-------------|
| J. R. McLavy, | J. W. Bailey, | E. L. York, |
| | C. G. Steel. | |

CADET CORPORALS.

| | | |
|-----------------|---------------|------------------|
| A. J. Wheeler, | J. A. King, | L. E. Lea, |
| J. C. McMurphy, | J. P. Gracey, | C. F. Sheffield. |

Company "G":

W. P. Ames.....Cadet Captain.
W. C. Lindley.....Cadet First Lieutenant.
K. L. Cockerham.....Cadet Second Lieutenant.
M. P. Myers.....Cadet First Sergeant.

CADET SERGEANTS.

| | | |
|---------------|---------------|--------------|
| E. K. Bynum, | K. U. Jones, | C. E. Cole, |
| J. C. Blythe, | W. E. Vernon, | S. R. Moore. |

CADET CORPORALS.

| | | |
|-------------------|-----------------|---------------|
| J. L. Lauderdale, | I. Jopes, | L. N. Felton, |
| W. E. Llewellen, | W. J. Apperson, | H. G. Gibbs. |

Company "H":

G. H. Lenoir.....Cadet Captain.
E. K. Strahan.....Cadet First Lieutenant.
H. Rainey.....Cadet Second Lieutenant.
C. B. Anders.....Cadet First Sergeant.

CADET SERGEANTS.

| | | |
|--------------|--------------|------------|
| F. J. Hurst, | V. W. Davis, | F. Rogers. |
|--------------|--------------|------------|

CADET CORPORALS.

| | | |
|------------------|----------------|---------------|
| W. R. Cruthirds, | R. W. Sanders, | G. W. Smith, |
| L. B. Hartness, | H. W. Stanton, | C. O. French. |
| | T. O. Tate. | |

THIRD BATTALION.

W. H. Alderman.....Cadet Major.
A. L. Darnell.....Cadet First Lieutenant and Bat-
talion Adjutant.
E. C. Alford.....Cadet Second Lieutenant and
Battalion Quartermaster
and Commissary.
E. R. Raney.....Cadet Battalion Sergeant Major.

Company "I":

T. M. Patterson.....Cadet Captain.
J. D. West.....Cadet First Lieutenant.
G. T. Blackwood.....Cadet First Sergeant.

CADET SERGEANTS.

| | | |
|-------------|-----------------|-------------|
| N. B. Ames, | G. P. Frenz, | C. G. Rook. |
| | J. G. Gholston. | |

CADET CORPORALS.

F. C. Weems,
W. McKnight,

C. G. Neal,
J. J. Ganaway,
R. C. Bayliss.

L. C. Mosely,
W. J. Scott,

Company "K":

J. S. McBee.....Cadet Captain.
T. I. Bozeman.....Cadet First Lieutenant.
H. H. Dodson.....Cadet Second Lieutenant.
F. H. Worthington.....Cadet First Sergeant.

CADET SERGEANTS.

E. V. Ellzey,
H. Bending,

N. Prisock,

B. C. Feigler,
I. Watson.

CADET CORPORALS.

J. W. Baylis,
J. T. Lloyd,

J. W. Crane,

C. P. Rawls,
W. A. Ranck.

Company "L":

.....Cadet Captain.
R. W. R. Welch.....Cadet First Lieutenant.
C. D. Roberts.....Cadet Second Lieutenant.
H. H. Treleaven.....Cadet First Sergeant.

CADET SERGEANTS.

J. M. Olive,
N. H. Brown,

H. B. Wooten,

J. D. Wise.
J. Chaffin.

CADET CORPORALS.

T. P. Cassidy,
W. Treleaven,

G. E. Sheffield,
F. L. Craft,
W. W. Faulk.

E. H. Bacot,
R. V. Hood,

Company "M":

M. C. Vaughn.....Cadet Captain.
E. C. Pittman.....Cadet First Lieutenant.
J. D. Lyons.....Cadet Second Lieutenant.
E. L. Pentecost.....Cadet First Sergeant.

CADET SERGEANTS.

T. Y. Williford,
W. Daniel,

E. M. Graham,

D. L. Prichard,
R. O. Vaughn.

CADET CORPORALS.

W. H. Calcote,
O. H. West,

C. W. Johnson,

W. M. Stark,
R. H. McInturff.

REGISTER OF STUDENTS.

GRADUATE STUDENTS.

| | |
|-----------------------|---------------------------|
| ALDRICH, M. T. | Animal Husbandry. |
| BACKSTROM, J. F. | Agricultural Engineering. |
| CARPENTER, J. W., JR. | Agronomy. |
| CUNNINGHAM, L. F. | Chemistry. |
| GILLELAND, R. V. | Engineering. |
| GRAHAM, F. C. | Agronomy. |
| GUYTON, G. | Industrial Education. |
| HARNED, H. H. | Bacteriology. |
| HAYDEN, J. C. | Animal Husbandry. |
| KENNA, J. M. | Agriculture. |
| MELLEN, F. D. | English. |
| MINGEE, G. C. | Dairying. |
| MINGEE, W. M. | Horticulture. |
| PRENTICE, L. G. | Agricultural Engineering. |
| ROBERDS, E. S. | Agronomy. |
| SIDES, J. E. | Agronomy. |
| SOLOMON, H. | Chemistry. |
| STAFFORD, E. W. | Entomology. |
| STEELE, H. C. | Chemistry. |
| WEST, J. T. | Agronomy. |

UNDERGRADUATES. SENIOR CLASS.

AGRICULTURAL COURSE.

| NAME. | COUNTY | POSTOFFICE. |
|--------------------|------------|-------------|
| Alderman, W. H. | Lincoln | Brookhaven |
| Allen, J. L. | Clay | Prairie |
| Ames, W. P. | *Virginia | Clarendon |
| Bell, H. C. | Oktibbeha | Starkville |
| Banks, H. | Tunica | Banks |
| Bibby, F. F. | Monroe | Smithville |
| Bridgeforth, R. M. | Holmes | Pickens |
| Brien, J. N. | Warren | Vicksburg |
| Brown, H. G. | Lauderdale | Meridian |
| Brown, L. | Itawamba | Ratliff |
| Bullock, E. L. | Pike | Nome |

*Outside the state.

| NAME. | COUNTY. | POSTOFFICE. |
|---------------------|------------|----------------------|
| Bullock, G. W. | Pike | Nome |
| Burns, J. B. | Itawamba | Ratliff |
| Carpenter, S. D. | Oktibbeha | Sessums |
| Cook, A. B. | Forrest | Hattiesburg |
| Darnell, A. L. | Holmes | Lexington |
| Davis, H. W. | Kemper | Daleville |
| Dickey, R. M. | Pike | Magnolia |
| Dodson, H. H. | Holmes | Goodman |
| Elliott, C. K., Jr. | *Kentucky | Henderson |
| Evans, T. S. | Lowndes | Columbus |
| Garmon, R. I. | Lee | Verona |
| Greer, S. J. | Lincoln | Bogue Chitto |
| Grimes, D. W. | Itawamba | Ratliff |
| Hanson, N. F. | *Tennessee | Memphis |
| Haynie, J. C. | Lowndes | Columbus |
| Hester, J. G. | Choctaw | Mathiston |
| Hinton, C. R. | Madison | Flora |
| Jones, E. A. | Grenada | Grenada |
| Lamoon, Nai | *Siam | |
| Lenoir, G. H. | Bolivar | Beulah |
| Lindsey, E. C. | Lafayette | Tula |
| Lominick, W. R. | Prentiss | Baldwyn |
| McBee, J. S. | Sunflower | Halstead |
| McCandliss, D. A. | Oktibbeha | Agricultural College |
| McCarty, J. C. | Hinds | Jackson |
| McCoy, L. E. B. | Scott | Morton |
| McElroy, J. H. | Union | Bethany |
| McGehee, A. F. | Panola | Como |
| McKay, H. M. | Oktibbeha | Agricultural College |
| McKewen, J. S. | Claiborne | Hermanville |
| McReynolds, E. C. | Oktibbeha | Starkville |
| Moore, J. B. | *Louisiana | Burnside |
| Naff, H. H. | Adams | Natchez |
| Nelson, C. B. | Panola | Crenshaw |
| O'Neal, J. R. | Hinds | Jackson |
| Olson, L. A. | Grenada | Elliott |
| Parker, W. D. | Oktibbeha | Agricultural College |
| Perkins, S. V. | Oktibbeha | Starkville |
| Raney, H. | Lauderdale | Vimville |
| Reed, M. D. | Oktibbeha | Maben |
| Rew, F. A. | Scott | Forrest |
| Riggan, R. C. | Monroe | Amory |
| Robbins, J. N. | Scott | Harperville |
| Roberts, C. D. | Itawamba | Clay |
| Scott, R. A. | Tunica | Robinsonville |
| Strahan, L. C. | Forrest | Hattiesburg |
| Walker, F. W. | Lauderdale | Meridian |
| Watson, J. A. | Lowndes | Columbus |
| Watson, J. G. | Leflore | Itta Bena |
| Welch, R. W. R. | Covington | Collins |
| White, E. F. | Lawrence | Nola |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|-----------------|-----------|-------------|
| White, R. P. | Lawrence | Nola |
| Williams, D. L. | Rankin | Florence |
| York, W. | Yalobusha | Coffeeville |
| IRREGULAR. | | |
| Noble, C. R. | Hinds | Learned |

ENGINEERING COURSE.

| | | |
|-----------------------|--------------|----------------------|
| Anderson, M. M. | Lauderdale | Meridian |
| Baker, F. | *Tennessee | Jackson |
| Best, K. H. | Montgomery | Winona |
| Blythe, A. T. | Adams | Natchez |
| Bolton, W. T., Jr. | Harrison | Biloxi |
| Bradley, H. R. | Yazoo | Yazoo City |
| Busby, R. E. | Wayne | Buckatunna |
| Bynum, W. M. | Oktibbeha | Sessums |
| Cary, L. A. | Yazoo | Lake City |
| Cavett, J. R. | Hinds | Jackson |
| Chiles, W. R. | Oktibbeha | Starkville |
| Clardy, W. J. | Clay | West Point |
| Collins, J. J. | Grenada | Hardy |
| Consley, H. L. | Marshall | Holly Springs |
| Critz, S. P. | Oktibbeha | Starkville |
| Crymes, T. P. | Forrest | Hattiesburg |
| Dunning, A. B., Jr. | Panola | Batesville |
| French, H. L. | Oktibbeha | Starkville |
| Gentsch, H. S. | Lowndes | Columbus |
| Heard, J. M., Jr. | Monroe | Aberdeen |
| Hoy, C. H. | Tallahatchie | Cascilla |
| Hunter, E. E. | Noxubee | Macoh |
| King, J. D. | Oktibbeha | Agricultural College |
| Knight, J. R. | DeSoto | Love Station |
| Kyle, H. A. | Lee | Saltillo |
| Latimer, R. A. | Tate | Thyatira |
| Lindley, W. C. | Lee | Baldwin |
| Lyons, J. D. | Warren | Vicksburg |
| Mason, J. G. | Clarke | Quitman |
| McAmis, J. C. | Alcorn | Corinth |
| McIlhenny, G. N. | Scott | Forest |
| Owen, R. | Oktibbeha | Starkville |
| Pepper, J. H. | Yazoo | Yazoo City |
| Peterson, J. B. | Noxubee | Brooksville |
| Ruffin, R. | Panola | Como |
| Russell, F. J. | Rankin | Puckett |
| Stansel, H. S. | Lowndes | Columbus |
| Stevenson, H. M. | Lauderdale | Lauderdale |
| Strahan, E. K. | Covington | Mount Olive |
| Thomson, C. C. | Attala | Kosciusko |
| Waddell, H. M. | Lowndes | Columbus |
| Weaver, W. B. | Lowndes | Columbus |
| West, J. D. | Attala | Kosciusko |
| Wilkinson, R. E., Jr. | Lauderdale | Meridian |
| Willis, L. A. | Washington | Elizabeth |

*Outside the state.

IRREGULARS.

| NAME. | COUNTY. | POSTOFFICE. |
|--------------------|-----------------|-------------|
| Lewey, H. E..... | Washington..... | Greenville |
| Pearson, C. W..... | Claiborne..... | Port Gibson |
| Ruffin, W. F..... | Panola..... | Como |
| York, C. V..... | Yalobusha..... | Coffeeville |

PEDAGOGICAL COURSE.

| | | |
|------------------------|----------------------|-------------|
| Alford, E. C..... | Pike..... | Magnolia |
| Arnold, W. A..... | Webster..... | Mantee |
| Bedenbough, M. M..... | Panola..... | Como |
| Bolton, J. L..... | Newton..... | Newton |
| Bozeman, T. I..... | Jefferson Davis..... | Prentiss |
| Carraway, J. O..... | Amite..... | Liberty |
| Chapman, C. P..... | Hinds..... | Pocahontas |
| Cockerham, K. L..... | Monroe..... | Quincy |
| Cook, T. I..... | Newton..... | Decatur |
| Goza, E. D..... | Claiborne..... | Wilsonville |
| Jacobs, R. D..... | Harrison..... | Wiggins |
| Patterson, T. M..... | Pike..... | McComb |
| Pittman, C. C..... | Pike..... | Tylertown |
| Roseborough, J. L..... | Tate..... | Senatobia |
| Rosenbaum, D. M..... | Lauderdale..... | Meridian |
| Saul, R. L..... | Clay..... | Montpelier |
| Sanders, P. H..... | Attala..... | Kosciusko |
| Thweatt, W. K..... | Tate..... | Coldwater |
| Vaughn, M. C..... | Lowndes..... | Caledonia |
| Wall, W. E..... | Covington..... | Lux |
| Wingo, G. W..... | Pike..... | Holmesville |

IRREGULARS.

| | | |
|-------------------|-----------------|-----------|
| Kinney, H. C..... | Warren..... | Vicksburg |
| Wells, P. L..... | Tishomingo..... | Iuka |

TEXTILE COURSE.

| | | |
|-------------------|-------------|---------|
| Brooks, C. S..... | Union..... | Myrtle |
| Rogers, J. T..... | Holmes..... | Pickens |

JUNIOR CLASS.

AGRICULTURAL COURSE.

| | | |
|---------------------|----------------|-------------|
| Anders, C. B..... | Warren..... | Vicksburg |
| Anderspn, J. C..... | Jones..... | Ellisville |
| Anthony, J. C..... | Oktibbeha..... | Starkville |
| Arnold, G. F..... | Oktibbeha..... | Starkville |
| Bacot, G. W..... | Pike..... | Ruth |
| Bailey, T. W..... | Attala..... | Kosciusko |
| Barron, D. N..... | Simpson..... | Pearl |
| Bearden, C. C..... | Pike..... | Holmesville |
| Bending, H..... | Hinds..... | Jackson |
| Blackburn, E..... | Newton..... | Decatur |

| NAME. | COUNTY. | POSTOFFICE |
|--------------------|-----------------|---------------|
| Blythe, J. C. | Adams | Natchez |
| Boyd, H. L. | Pike | Holmesville |
| Brannaman, H. W. | Yazoo | Benton |
| Breland, G. W. | Harrison | Rosalie |
| Brown, N. H. | Lowndes | Columbus |
| Bullock, C. T. | Pike | Holmesville |
| Butts, J. L. | Lowndes | Artesia |
| Bynum, E. K. | Lee | Saltillo |
| Byrd, E. H. | Monroe | Smithville |
| Carothers, A. B. | Oktibbeha | Starkville |
| Carter, H. H. | Tippah | Blue Mountain |
| Cary, C. L. | Yazoo | Lake City |
| Chaffin, J. | Monroe | Nettleton |
| Clower, C. A., Jr. | Washington | Hollandale |
| Cobb, E. | Calhoun | Pine Valley |
| Critz, J. E. | Oktibbeha | Starkville |
| Deen, E. E. | Jefferson Davis | Bassfield |
| Deen, S. R. | Jefferson Davis | Bassfield |
| Ellzey, E. V. | Pike | Tylertown |
| Gernon, W. | Harrison | Gulfport |
| Graham, E. M. | Madison | Canton |
| Grantham, H. G. | Simpson | Pinola |
| Hartman, D. C. | Lowndes | Crawford |
| Henry, E. E. | Montgomery | Winona |
| Hinton, E. F. | Madison | Flora |
| Hogg, G. A. | *Arkansas | Pine Bluff |
| Holton, J. C. | Winston | Louisville |
| Howell, J. F. | Pike | Verna |
| Howell, W. C. | Oktibbeha | Starkville |
| Howerton, J. D. | Oktibbeha | Starkville |
| Hull, J. W. | Oktibbeha | Starkville |
| Hurst, F. | Noxubee | Fern Springs |
| Hurst, F. J. | Noxubee | Fern Springs |
| Jones, K. U. | Oktibbeha | Starkville |
| Kinard, J. N. | Lauderdale | Marion |
| Korb, A. F. | Hinds | Jackson |
| Legett, H. H. | Hinds | Jackson |
| Martin, H. E. | Noxubee | Macon |
| Maxwell, J. A. | Oktibbeha | Starkville |
| McArthur, H. | Kemper | Gholson |
| McNeill, S. C. | Clarke | Quitman |
| McPherson, H. A. | Tate | Coldwater |
| McWilliams, L. C. | Kemper | Daleville |
| McWilliams, W. R. | Oktibbeha | Starkville |
| Moncrief, W. S. | Oktibbeha | Starkville |
| Montgomery, J. P. | Oktibbeha | Starkville |
| Moore, S. R. | *Louisiana | Monroe |
| Morgan, E. G. | Pike | Osyka |
| Myers, M. P., Jr. | Tunica | Crews |
| Neal, H. S. | Carroll | Carrollton |
| North, L. G. | Yazoo | Silver City |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|--------------------|--------------|--------------|
| Pace, W. B. | Scott | Lake |
| Passmore, E. R. | Issaquena | Grace |
| Peters, C. G. | Noxubee | Mashulaville |
| Powers, H. T. | Oktibbeha | Starkville |
| Raney, E. R. | Lauderdale | Vimville |
| Robinson, T. M. | Hinds | Jackson |
| Rogers, A. M. | Holmes | West |
| Rogers, F. | Covington | Ora |
| Scott, J. C. | Webster | Mantee |
| Simmons, J. M. | Pike | Magnolia |
| Steele, C. G. | Tallahatchie | Oakland |
| Steen, W. E. | Rankin | Florence |
| Suttle, A. D. | Winston | Louisville |
| Terry, J. E. | Forrest | Brookland |
| Thomas, S. M., Jr. | Noxubee | Macon |
| Treleaven, H. H. | *Louisiana | New Orleans |
| Underwood, T. H. | Alcorn | Kossuth |
| Vaughn, R. O. | Lowndes | Caledonia |
| Vernon, W. E. | Pike | McComb |
| Watson, I. | LeFlore | Itta Bena |
| Whittington, C. E. | Amite | Liberty |
| Williford, T. Y. | Carroll | Carrollton |
| Winters, C. | Attala | McCool |

IRREGULARS.

| | | |
|------------------|-----------|---------------|
| Adams, N. S. | Jones | Laurel |
| Aldrich, R. E. | Benton | Michigan City |
| Baker, H. G. | Holmes | Lexington |
| Cox, H. E. | Oktibbeha | Starkville |
| Kidd, J. F., Jr. | Scott | Lake |
| Kite, J. C. | Choctaw | Weir |
| Kiblinger, L. B. | *Illinois | Pepper City |
| Koger, T. J. | Noxubee | Brooksville |
| Marshall, A. R. | Clay | Montpelier |
| Peterson, J. D. | Leflore | Money |
| Peterson, J. G. | Sunflower | Blaine |
| Rogers, G. | Newton | Decatur |
| Ruffin, D. A. | Hinds | Jackson |

ENGINEERING COURSE.

| | | |
|---------------------|-----------|---------------|
| Allen, D. E. | *Arkansas | Hot Springs |
| Ames, N. B. | *Virginia | Clarendon |
| Anderson, C. L. | Madison | Flora |
| Blackwood, G. T. | Sunflower | Whitney |
| Blankfield, M. | *Texas | Galveston |
| Bounds, H. G. | Simpson | Mendenhall |
| Brandon, L. W., Jr. | Wilkinson | Pinckneyville |
| Brumby, A. S. | Holmes | Goodman |
| Clower, C. M. | Holmes | Durant |
| Cole, C. E. | Yazoo | Yazoo City |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|-----------------------|------------|----------------------|
| Cozzani, O. A. | Warren | Vicksburg |
| Crouch, T. M. | Madison | Madison |
| Daniel, W. | Tippah | Blue Mountain |
| Dillard, C. L. | Coahoma | Lula |
| Feigler, B. C. | Leflore | Minter City |
| Francis, J. S. | Lee | Tupelo |
| Frentz, G. P., Jr. | Jackson | Pascagoula |
| Gholston, J. G. | Chickasaw | Woodland |
| Hudson, J. D. | Alcorn | Rienzi |
| Mayerhoff, G. F. | Clarke | Basic |
| McArthur, D. | Harrison | Gulfport |
| Miller, O. J. | Hinds | Jackson |
| Nethery, S. K. | Noxubee | Shuqualak |
| Netto, L. J. | Jackson | Ocean Springs |
| Olive, J. M. | Madison | Camden |
| Pentecost, E. L., Jr. | Carroll | Coila |
| Potter, F. E. | Forrest | Hattiesburg |
| Prichard, D. L., Jr. | Prentiss | Wheeler |
| Rook, C. G. | Quitman | Lambert |
| Smith, M. P. | Panola | Batesville |
| Taylor, W. P. | Calhoun | Calhoun City |
| Tillman, A. G. | Warren | Vicksburg |
| Tucker, R. | Bolivar | Pace |
| Turnage, J. G. | Grenada | Grenada |
| Varnado, O. D. | Pike | Osyka |
| Walker, W. W. | Oktibbeha | Agricultural College |
| White, C. D. | Madison | Canton |
| Wise, J. D., Jr. | *Tennessee | Jackson |
| Wooten, H. B. | Tate | Coldwater |
| Worthington, F. H. | Covington | Collins |
| York, E. L. | Yalobusha | Coffeetown |

IRREGULARS.

| | | |
|-------------------|------------|-------------|
| Apperson, W. J. | DeSoto | Walls |
| Boone, S. J. | Lawrence | Wanilla |
| Dasher, M. R. | Oktibbeha | Starkville |
| Jacobs, P. B. | Lowndes | Columbus |
| Lewis, R. E., Jr. | Lauderdale | Meridian |
| Madison, E. E. | Noxubee | Brooksville |
| Roberts, A. D. | Lauderdale | Meridian |
| Tillman, E. C. | Amite | Centerville |

PEDAGOGICAL COURSE.

| | | |
|----------------------|------------|------------|
| Anderson, J. R., Jr. | Yazoo | Zeigler |
| Crumpton, W. M. | Oktibbeha | Starkville |
| Hubbard, T. G. | Noxubee | Macon |
| Lavender, F. C. | Kemper | Scooba |
| Prisock, N. | Winston | Louisville |
| Roseborough, W. | Tate | Senatobia |
| Tomlinson, E. S. | Oktibbeha | Starkville |
| Winkler, M. H. | Lauderdale | Meridian |

*Outside the State.

IRREGULARS.

| NAME. | COUNTY. | POSTOFFICE. |
|-----------------|---------|-------------|
| Aycock, D. B. | Calhoun | Hohenlinden |
| Deavours, B. M. | Jones | Laurel |
| Johnson, H. G. | Hinds | Jackson |
| O'Kelly, C. M. | Warren | Vicksburg |
| Smith, D. | Hinds | Jackson |

GENERAL SCIENCE COURSE.

| | | |
|-----------------------|-----------|---------------|
| Bailey, J. W. | Hinds | Jackson |
| Clarke, L. E. | Hinds | Jackson |
| Coleman, J. M. | Choctaw | Eupora |
| Davis, V. W. | Covington | Collins |
| Donaldson, W. T., Jr. | Monroe | Strong |
| Dunn, W. C. | Pike | Summit |
| Ellzey, E. F. | Pike | Tylertown |
| Enochs, J. W. | Lee | Shannon |
| Freeman, G. M. | Sunflower | Freeman |
| Gaston, B. W. | Oktibbeha | Oktoc |
| Howerton, H. B. | Oktibbeha | Starkville |
| Illing, E. W., Jr. | Jackson | Ocean Springs |
| Kirkpatrick, L. L. | Hinds | Jackson |
| McCarty, D. M. | Jones | Laurel |
| McLavy, J. R. | Yalobusha | Coffeeville |
| Mitts, K. | Lee | Tupelo |
| Lackey, J. B. | Hinds | Clinton |
| Thompson, R. | Lincoln | Brookhaven |
| Thompson, T. | Lincoln | Brookhaven |
| Turner, S. L. | Neshoba | Dixon |

SOPHOMORE CLASS.

AGRICULTURAL COURSE.

| | | |
|---------------------|--------------|----------------------|
| Anderson, E. M. | Wilkinson | Centerville |
| Anderson, J. R. | Marshall | Holly Springs |
| Anderson, L. W. | Oktibbeha | Agricultural College |
| Anderson, W. E. | Scott | Lake |
| Austin, H. M. | Marion | Columbia |
| Bacot, E. H. | Hinds | Terry |
| Bailey, J. D. | Attala | Ethel |
| Batty, R. H. | Pearl River | Poplarville |
| Bayliss, R. C. | Forrest | Hattiesburg |
| Benton, W. M. | Simpson | Mendenhall |
| Blanton, C. H. | Choctaw | Ackerman |
| Bonelli, A. E. | Warren | Vicksburg |
| Bonner, J. E. | Tallahatchie | Oakland |
| Brien, E. L., Jr. | Warren | Vicksburg |
| Buchanan, R. | Tallahatchie | Tatum |
| Cain, W. R. | Monroe | Hamilton |
| Calcote, W. H. | Lincoln | Ollie |
| Case, J. G. | Clarke | Stonewall |
| Cassidy, T. P., Jr. | Lee | Saltillo |

| NAME. | COUNTY. | POSTOFFICE. |
|----------------------|-----------------|----------------------|
| Corley, R. C. | Coahoma | Farrell |
| Craft, F. L. | Attala | West |
| Crenshaw, E. F. | Bolivar | Scott |
| Cutrer, T. H. | Pike | Osyka |
| Dickey, E. K. | Pike | Magnolia |
| Dorrill, P. | Leake | Edinburg |
| Evans, W. A. | Monroe | Muldon |
| Felton, L. N. | *Louisiana | Mer Rouge |
| Fontenot, J. A. | *Louisiana | Cataro |
| French, C. O. | Franklin | Hamburg |
| Gaddy, T. L. | Monroe | Amory |
| Gannaway, J. J. | DeSoto | Nesbitt |
| Goza, J. B. | Claiborne | Hermanville |
| Gracy, J. P. | Lee | Verona |
| Gray, L. H. | Jefferson Davis | Prentiss |
| Gray, W. G. | Jones | Ellisville |
| Hamilton, A. G. | Panola | Central Academy |
| Hamilton, J. R. | Chickasaw | Houlka |
| Hardaway, J. W. | Benton | Michigan City |
| Harrison, C. F. | Madison | Canton |
| Hartness, L. B. | Oktibbeha | Starkville |
| Hicks, L. | Sharkey | Rolling Fork |
| Hillard, W. G. | *Arkansas | Hot Springs |
| Huff, V. E. | Wilkinson | Centerville |
| Hughes, C. A. | Alcorn | Kossuth |
| Jopes, I. | Hancock | Logtown |
| Kimball, H. H. | Hinds | Jackson |
| Kimball, G. B. | Oktibbeha | Agricultural College |
| King, J. A. | Chickasaw | Egypt |
| Knight, R. R. | Warren | Vicksburg |
| Lauderdale, J. L. E. | Quitman | Sledge |
| Lawley, H. H. | Lowndes | Columbus |
| Lawley, J. B. | Lowndes | Columbus |
| Lee, L. E. | DeSoto | Nesbitt |
| Lewellen, W. E. | Prentiss | Baldwyn |
| Lewis, H. D. | Harrison | Long Beach |
| Lyle, L. R. | Leake | Lena |
| Marion, F. F. | | |
| Martin, F. A. | Rankin | Pelahatchie |
| McAlister, J. T. | Madison | Way |
| McArthur, J. N. | Kemper | Gholson |
| McMahon, W. E. | Oktibbeha | Starkville |
| McMurphy, J. C. | Scott | Harpersville |
| Mills, A. P. | Choctaw | Weir |
| Miner, R. C. | Lamar | Lumberton |
| Moose, J. M. | *Arkansas | Little Rock |
| Morris, B. | Marion | Columbia |
| Neal, C. G. | Tallahatchie | Webb |
| Nichols, L. E. | Lauderdale | Meridian |
| Oliver, J. | Lowndes | Columbus |
| Owens, C. F. | Pike | Tylertown |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|-------------------|-------------|----------------------|
| Parker, W. C. | Copiah | Crystal Springs |
| Ranck, W. A. | Oktibbeha | Agricultural College |
| Renfrow, S. A. | Copiah | Beauregard |
| Rew, E. Y. | Scott | Forest |
| Roberts, E. L. | Pike | Tylertown |
| Rogers, G. | Newton | Decatur |
| Rowan, J. K. | Jones | Laurel |
| Saunders, T. A. | Oktibbeha | Starkville |
| Scherer, J. E. | *Texas | Weatherford |
| Scobey, R. B. | Calhoun | Vardaman |
| Scott, W. J. | Tate | Coldwater |
| Sharbini, A. A. | *Egypt | Cairo |
| Short, C. G. | Panola | Sardis |
| Short, H. G. | Panola | Sardis |
| Simmons, W. E. | Pike | Magnolia |
| Smith, A. B. | Pearl River | Poplarville |
| Smith, C. | Pike | Tylertown |
| Smith, E. | Kemper | DeKalb |
| Smith, G. W. | Lauderdale | Increase |
| Spurlock, K. L. | Amite | Summit |
| Stanton, H. W. | *Tennessee | Memphis |
| Stigler, A. N. | Sunflower | Ruleville |
| Sturgis, W. E. | Issaquena | Grace |
| Tate, J. J. | Pike | Osyka |
| Tate, T. O. | Jones | Laurel |
| Treleaven, W. | *Louisiana | New Orleans |
| Turner, G. A. | Quitman | Marks |
| Wallace, H. F. | Oktibbeha | Starkville |
| Walker, H. L. | Lauderdale | Meridian |
| West, O. H. | Monroe | Gatman |
| Wheeler, A. J. | Newton | Newton |
| Williamson, B. A. | Wilkinson | Woodville |
| Woodward, J. C. | Harrison | Long Beach |
| Worsham, W. E. | *Louisiana | Newverda |
| Young, J. R. | Pontotoc | Sarepta |

IRREGULARS.

| | | |
|-------------------|-----------------|---------------|
| Baker, H. C. | Jefferson Davis | Prentiss |
| Falls, H. D. | *Ohio | Cleveland |
| Frederick, W. J. | Harrison | Gulfport |
| Guthrie, C. W. | *Alabama | Ensley |
| Hood, R. V. | Jones | Moselle |
| Jeffery, Y. B. | Bolivar | Duncan |
| Jones, H. T. | Marshall | Holly Springs |
| Jumper, H. Y. | Prentiss | Rienzi |
| Montgomery, S. A. | Oktibbeha | Osborn |
| Pickett, N. T. | Marion | Columbia |
| Smith, L. O. | Chickasaw | Van Vleet |
| Swann, P. R. | Noxubee | Macon |
| Veazey, W. J. | Tate | Senatobia |

*Outside the State.

ENGINEERING COURSE.

| NAME. | COUNTY. | POSTOFFICE. |
|-------------------|-----------------|----------------|
| Agnews, P. B. | | |
| Bailey, J. M. | Hinds | Jackson |
| Baxter, M. M. | Lamar | Baxterville |
| Bernhardt, L. P. | Grenada | Holcomb |
| Bourn, W. A. | Jefferson Davis | Oakdale |
| Brandt, H. C. | Harrison | Pass Christian |
| Burkhalter, S. B. | Jackson | Lane |
| Catchings, C. B. | Copiah | Georgetown |
| Coffee, H. R. | Lowndes | Columbus |
| Coke, W. T. | Wilkinson | Centerville |
| Crane, J. W. | Clarke | Stonewall |
| Crook, R. L. | Warren | Vicksburg |
| Day, L. | Wilkinson | Woodville |
| D'Olive, C. R. | Harrison | Ten Mile |
| Donald, R. H. | Clarke | Quitman |
| Enochs, W. A. | Pike | Fernwood |
| Faulk, W. W. | Greene | Leakesville |
| Grace, W. H. | Lowndes | Columbus |
| Harris, R. P. | Lowndes | Steens |
| Hall, A. | Hinds | Jackson |
| Hinkle, M. R. | Lowndes | Crawford |
| Horgan, H. H. | Lauderdale | Meridian |
| Johnson, C. W. | Harrison | Gulfport |
| Johnson, E. E. | Harrison | Gulfport |
| Johnson, M. S. | Quitman | Marks |
| Jones, V. N. | Leflore | Schlater |
| Lewis, J. N. | Jackson | Ocean Springs |
| Lloyd, J. T. | Clay | West Point |
| Lowther, H. A. | Harrison | Gulfport |
| McInturff, R. H. | Pike | McComb |
| McKnight, W. | Tishomingo | Iuka |
| Moseley, L. C. | Clarke | Shubuta |
| Nichols, W. S. | Madison | Canton |
| Noel, E. F. | Holmes | Lexington |
| Overton, J. F. | *Oklahoma | Duncan |
| Pickens, W. N. | Holmes | Lexington |
| Pierce, C. L. | Pike | Osyka |
| Rawls, C. P. | Forrest | McLaurin |
| Rich, J. C. | Tate | Senatobia |
| Scott, D. M. | Wilkinson | Woodville |
| Shepherd, A. P. | Holmes | Lexington |
| Stark, W. M. | *Tennessee | Memphis |
| Vance, W. D. | Calhoun | Slate Springs |
| Weems, F. C. | Clarke | Shubuta |
| Willemain, F. H. | *Massachusetts | Holyoke |
| Willingham, W. M. | Webster | Eupora |
| Zucarro, J. | Adams | Natchez |

*Outside the State.

IRREGULARS.

| NAME. | COUNTY. | POSTOFFICE. |
|------------------|-----------|-------------|
| Lockridge, L. P. | Sharkey | Catchings |
| Waddell, H. B. | Lowndes | Columbus |
| Whitlock, R. F. | *Missouri | Joplin |
| Williams, R. O. | Hinds | Jackson |

PEDAGOGICAL COURSE.

| | | |
|--------------------|------------|---------------|
| Anderson, W. E. H. | Yazoo | Zeiglersville |
| Baker, H. C. | Rankin | Brandon |
| Banks, H. | Tunica | Banks |
| Bright, W. L. | Choctaw | Ackerman |
| Burks, S. V. | Choctaw | Ackerman |
| Conger, B. C. | Carroll | Blackmonton |
| Covington, D. E. | Lauderdale | Meridian |
| Cruthirds, W. R. | Harrison | Lyman |
| Duncan, P. E. | Clay | West Point |
| Greer, R. A. | Marshall | Potts Camp |
| Gully, T. T. | Lauderdale | Meridian |
| Hall, W. B. | Jasper | Lake Como |
| Hobby, E. L. | Winston | Plattsburg |
| Hughes, C. A. | Alcorn | Kossuth |
| Loper, H. | Scott | Lake |
| Mayfield, W. B. | Lafayette | Etta |
| McDonald, R. W. | Clay | West Point |
| McGough, McNairy | Scott | Morton |
| Merkel, D. B. | Forrest | Hattiesburg |
| Patty, I. H. | Noxubee | Cliftonville |
| Sanders, G. | Winston | High Point |
| Sanders, R. W. | Attala | Kosciusko |
| Sheffield, G. E. | Itawamba | Ratliff |
| Sherard, T. B. | Alcorn | Kossuth |
| Sullivante, E. W. | Attala | Kosciusko |
| Swearengen, B. S. | Yalobusha | Ashland |
| Tardy, T. W. | Carroll | Winona |
| White, Wm. A. | Clay | West Point |

GENERAL SCIENCE COURSE.

| | | |
|------------------|------------|--------------|
| Baggett, A. J. | Sharkey | Anguilla |
| Baylis, J. W. | Jones | Estabutchie |
| Doyle, G. F. | Yalobusha | Water Valley |
| Edwards, A. C. | Jones | Laurel |
| Freeman, J. Z. | Bolivar | Shaw |
| Gibbs, H. G. | Hinds | Learned |
| Harding, W. E. | Leflore | Sunny Side |
| Kimbrough, M. M. | Carroll | Holcomb |
| Logan, W. E. | Jefferson | Fayette |
| McCain, G. W. | Webster | Eupora |
| McCain, J. E. | Webster | Eupora |
| Sheffield, C. F. | Calhoun | Pittsboro |
| Steele, C. | *Tennessee | Obion |
| Trotter, C. M. | Attala | Vaiden |

*Outside the State.

FRESHMAN CLASS.

AGRICULTURAL COURSE.

| NAME. | COUNTY. | POSTOFFICE. |
|---------------------|-----------------|---------------|
| Alford, H. E. | Pike | Magnolia |
| Allen, L. G. | Coahoma | Lula |
| Arnold, H. B. | *Arkansas | Arkadelphia |
| Arnold, M. H. | Oktibbeha | Starkville |
| Anthony, B. F. | Oktibbeha | Starkville |
| Barnes, J. A. | Covington | Taylorsville |
| Bedenbough, P. G. | Panola | Como |
| Belts, F. | Lowndes | Columbus |
| Bennett, C. S. | Adams | Natchez |
| Boggan, R. L. | Simpson | Braxton |
| Bostic, W. E. | Lee | Salttillo |
| Box, W. E. | Clarke | Shubuta |
| Brashier, C. E. | Clarke | Shubuta |
| Brinkley, H. H. | Benton | Michigan City |
| Broyles, W. B. | Lowndes | Crawford |
| Brumfield, H. B. | Pike | Magnolia |
| Brumfield, J. H. | Amite | Gloster |
| Brunson, E. | Clarke | Enterprise |
| Byrd, J. W. | Holmes | Lexington |
| Burnell, J. A. | Coahoma | Clarksdale |
| Bush, J. A. | Carroll | Greenwood |
| Carpenter, C. J. | Oktibbeha | Starkville |
| Carpenter, W. H. | Oktibbeha | Starkville |
| Case, J. A. | Clarke | Stonewall |
| Chambers, B. L. | Oktibbeha | Starkville |
| Coffey, T. B. | Marshall | Holly Springs |
| Cooper, A. S. | Yazoo | Yazoo City |
| Cox, R. | Prentiss | Booneville |
| Crigler, T. W. | Noxubee | Macon |
| Darnell, B. S. | Holmes | Lexington |
| Dean, G. M. | Jefferson Davis | Bassfield |
| Diggs, W. E. | Holmes | Lexington |
| Dorsey, M. E. | Jones | Laurel |
| Eustis, W. B. | *Louisiana | New Orleans |
| Few, M. J. | Calhoun | Hohenlinden |
| Few, W. C. | Calhoun | Hohenlinden |
| Field, R. J. | Amite | Centerville |
| Gallent, C. N. | Amite | Airel |
| Gallent, L. M., Jr. | Amite | Airel |
| Gibson, J. B. | Copiah | Barlow |
| Gill, W. C. | Monroe | Aberdeen |
| Goyer, J. T. | Tishomingo | Iuka |
| Gray, C. F. | Tallahatchie | Sumner |
| Greer, C. C. | Lincoln | Bogue Chitto |
| Grimes, M. L. | Itawamba | Ratliff |
| Guess, E. C. | Tunica | Clarke |
| Gunn, B. R. | Oktibbeha | Starkville |
| Hailes, C. W. | Jones | Moselle |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|----------------------|-----------------|----------------------|
| Haines, W. W. | Winston | Sturgis |
| Hawkins, Z. P. | Calhoun | Vardaman |
| Holmes, R. M. | Forrest | Hattiesburg |
| Horton, L. E. | Tippah | Walnut |
| Jackson, I. M. | Tishomingo | Iuka |
| Johnson, G. | Holmes | Lexington |
| Jones, J. R. | Carroll | Black Hawk |
| Jourdon, D. O. | Tishomingo | Iuka |
| Killebrew, J. R. | Holmes | Ebenezer |
| King, H. L. | Chickasaw | Buenavista |
| Kittrell, B. F. | Holmes | Lexington |
| Lamar, L. | Copiah | Crystal Springs |
| Magruder, R. H. | Oktibbeha | Starkville |
| Major, H. C. | Newton | Newton |
| Martin, N. S. | Lauderdale | Meridian |
| May, C. L. | Simpson | D'Lo |
| Mayer, W. B. | Rankin | Brandon |
| McArthur, R. | Kemper | Preston |
| McCampbell, S. C. | Oktibbeha | Agricultural College |
| McClain, W. H. | Washington | Greenville |
| McIntosh, T. L. | Amite | Olio |
| McWilliams, D. E. | Kemper | Daleville |
| Milan, J. B., Jr. | *Louisiana | Dodson |
| Montgomery, W. A. | Benton | Ashland |
| Moose, J. M. | *Arkansas | Little Rock |
| Morrow, J. A. | | |
| Newton, J. W. | Leflore | Itta Bena |
| Nichols, A. N. | Yazoo | Vaughn |
| Nickles, E. B. | Oktibbeha | Starkville |
| Nickles, R. W. | Oktibbeha | Starkville |
| O'Quinn, C. L. | Pike | Magnolia |
| Pace, J. V. | Scott | Lake |
| Parham, H. | Lee | Saltillo |
| Parker, A. N. | Copiah | Crystal Springs |
| Patten, T. W. | Pike | Tylertown |
| Peebles, T. M. | Neshoba | Philadelphia |
| Pittman, F. B. | Wayne | Waynesboro |
| Pou, W. L. | Wayne | Waynesboro |
| Powell, L. W. | Forrest | Hattiesburg |
| Price, C. W. | Jefferson Davis | Prentiss |
| Prichard, L. M., Jr. | Oktibbeha | Starkville |
| Pryor, R. W. | Clay | West Point |
| Pyburn, W. J. | *Louisiana | Dodson |
| Reddock, J. C. | Jones | Summerland |
| Reeves, G. C. | Pike | McComb City |
| Roark, J. L. | Yalobusha | Water Valley |
| Robbins, J. K. | Union | New Albany |
| Rogers, J. D., Jr. | Newton | Decatur |
| Rowan, J. A. | Jones | Laurel |
| Sample, W. P. | Holmes | Ebenezer |
| Sharpe, J. H. | Adams | Natchez |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|--------------------------|----------------------|-------------|
| Shaw, M. J..... | Choctaw..... | Ackerman |
| Simmons, M. L..... | Lauderdale..... | Meridian |
| Smith, C. C..... | Tishomingo..... | Iuka |
| Smith, W. T..... | Panola..... | Crenshaw |
| Stennis, T. J..... | Noxubee..... | Macon |
| Stewart, R. H..... | Pearl River..... | Caesar |
| Sudduth, W. R..... | Oktibbeha..... | Starkville |
| Sutherland, C. F..... | Bolivar..... | Benoit |
| Tate, W. L..... | Pike..... | Osyka |
| Thomas, T. A..... | *Tennessee..... | Raleigh |
| Travis, B. S..... | Amite..... | Peoria |
| Turnage, R. H..... | Yazoo..... | Benton |
| Turner, J. M..... | Neshoba..... | Dixon |
| Upshaw, R. V..... | Holmes..... | Pickens |
| Walton, I. H..... | Newton..... | Newton |
| Weeks, L. R..... | Copiah..... | Barlow |
| Weems, A. H..... | Clarke..... | Shubuta |
| Wheatley, W. F..... | Washington..... | Greenville |
| Whittington, C. S..... | Franklin..... | Eddiceton |
| Williams, J. H., Jr..... | Jefferson Davis..... | Prentiss |
| Williford, E. S..... | Carroll..... | Carrollton |

ENGINEERING COURSE.

| | | |
|----------------------------|-----------------|----------------|
| Addington, W. L., Jr..... | Yalobusha..... | Water Valley |
| Applewhite, J. P..... | Montgomery..... | Winona |
| Armstrong, F. O..... | Newton..... | Hickory |
| Barreda, D. P..... | Jackson..... | Pascagoula |
| Bethea, J. D..... | Lamar..... | Sumrall |
| Bizzell, L. C..... | Tate..... | Strayhorn |
| Blackwell, C. B..... | *Tennessee..... | Memphis |
| Blackwell, G. W., Jr..... | *Tennessee..... | Memphis |
| Brandon, C. N..... | Monroe..... | Prairie |
| Brewer, T. O..... | Tate..... | Senatobia |
| Brooks, L. Jr..... | Lafayette..... | Oxford |
| Calcote, A. T..... | Tate..... | Cold Water |
| Cannon, F. H..... | Lawrence..... | Monticello |
| Coulter, L..... | Covington..... | Collins |
| Cox, R. V..... | Prentiss..... | Booneville |
| Dean, T. J., Jr..... | DeSoto..... | Nesbitt |
| Dempf, J. M..... | Harrison..... | Pass Christian |
| Dent, D. W., Jr..... | Noxubee..... | Macon |
| Durr, R. L..... | Simpson..... | Pinola |
| Elixson, J. B., Jr..... | Monroe..... | Aberdeen |
| Fisher, H. G., Jr..... | Warren..... | Vicksburg |
| Gathings, M. W., Jr..... | Monroe..... | Prairie |
| Gladney, R. H. B., Jr..... | Panola..... | Sardis |
| Goddard, E. M..... | Oktibbeha..... | Oktoc |
| Gower, J. H..... | Lee..... | Baldwin |
| Gurney, C. F..... | Tippah..... | Ripley |
| Gurney, W. C..... | Tippah..... | Ripley |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|----------------------|--------------|----------------|
| Hackleman, C. C. | Lowndes | Columbus |
| Haigler, J. G. | Perry | Richton |
| Harrison, L. P. | Madison | Canton |
| Harrison, R. E. | Lowndes | Columbus |
| Henson, F. E. | Tallahatchie | Enid |
| Hesse, H. A. | Pike | McComb City |
| Hill, B. C. | Chickasaw | Houston |
| Hillman, S. J. | Greene | Hillman |
| Hollingsworth, W. H. | Attala | Kosciusko |
| Hood, J. R. | Harrison | Saucier |
| Irby, D. S. | Yalobusha | Oakland |
| Jean, L. G. | Chickasaw | Houston |
| Johnson, G. E. | Yazoo | Bentonla |
| Jones, L. J. | Montgomery | Winona |
| Jones, W. R. | Claiborne | Hermanville |
| King, L. R. | Newton | Battlefield |
| Kinney, F. G. | Lawrence | Monticello |
| Knost, M. F. | Harrison | Pass Christian |
| Lewis, F. J. | Harrison | Long Beach |
| Lewis, M. W., Jr. | Benton | Michigan City |
| Livingston, F. A. | Winston | Louisville |
| Logue, A. A. | Hinds | Jackson |
| Maute, W. C. | Warren | Vicksburg |
| Maxwell, M. C. | DeSoto | Nesbitt |
| McCorkle, J. L. | Tallahatchie | Charleston |
| McGee, C. C. | Clarke | Quitman |
| McLaurin, D. C., Jr. | Lauderdale | Meridian |
| McLeod, C. H. | Covington | Mt. Olive |
| McWillie, T. A. | Tishomingo | Tishomingo |
| Meek, W. L. | Holmes | Lexington |
| Miller, E. C. | Covington | Collins |
| Montgomery, G. M. | Lauderdale | Meridian |
| Montgomery, W. S. | Clay | West Point |
| Moore, C. W. | Pike | Magnolia |
| Never, P. J. | Harrison | Gulfport |
| Nance, R. L. | Washington | Greenville |
| Newkirk, R. L. | Tallahatchie | Charleston |
| Nugent, H. W. | Bolivar | Rosedale |
| Palmes, W. L. | Wayne | Chicora |
| Parrish, C. W. | Holmes | Lexington |
| Peeler, L. H. | Prentiss | Booneville |
| Pepper, L. D., Jr. | Holmes | Lexington |
| Priestley, J. T. | Harrison | Gulfport |
| Saucier, L. R. | Harrison | Saucier |
| Scales, W. M. | Oktibbeha | Starkville |
| Selman, E. E. | Lawrence | Monticello |
| Shackleford, R. H. | Washington | Greenville |
| Smith, H. M. | Perry | Richton |
| Stevenson, A. D. | Choctaw | McCool |
| Strahan, C. A. | Forrest | Hattiesburg |
| Sugden, J. A. | Harrison | Long Beach |
| Swartzfager, B. W. | Scott | Lake |

| NAME. | COUNTY. | POSTOFFICE. |
|------------------------|-----------------|-------------|
| Taylor, C. W..... | Rankin..... | Pelahatchie |
| Taylor, G. J..... | Scott..... | Martin |
| Taylor, R. D..... | Monroe..... | Aberdeen |
| Terrell, I. M..... | Clay..... | West Point |
| Thompson, E. K..... | Adams..... | Natchez |
| Truss, F. W..... | *Tennessee..... | Memphis |
| Turner, W. S., Jr..... | Lowndes..... | Crawford |
| Vaughn, V. A..... | *Tennessee..... | Nashville |
| Wallace, S. C..... | Madison..... | Canton |
| Ward, P. G..... | George..... | Lucedale |
| Winborn, E. D. | Pike..... | McComb City |

PEDAGOGICAL COURSE.

| | | |
|-------------------------|----------------------|--------------|
| Banks, L. D..... | Tunica..... | Banks |
| Biglane, O. J..... | Covington..... | Collins |
| Brown, D. W..... | Itawamba..... | Ratliff |
| Dale, P. A..... | Jefferson Davis..... | Prentiss |
| Eichelberger, O. H..... | Lowndes..... | Columbus |
| Graves, H. B..... | Madison..... | Flora |
| Halbert, A. C..... | Lowndes..... | Columbus |
| Harthcock, B. F..... | Holmes..... | Ebenezer |
| Lutrick, H. G..... | Madison..... | Flora |
| Mahoney, G. A..... | Leflore..... | Itta Bena |
| McNeel, E. K..... | Winston..... | Gholston |
| Miller, M. C..... | Neshoba..... | Philadelphia |
| Newsom, C..... | Lauderdale..... | Meridian |
| Patty, W. B., Jr..... | Noxubee..... | Macon |
| Peek, E. A..... | Jasper..... | Hickory |
| Quinn, C. B..... | Marion..... | Columbia |
| Sauls, S. W..... | Lawrence..... | Tilton |
| Tyrone, J. C..... | Jefferson Davis..... | Prentiss |
| Williams, J. H..... | Jefferson Davis..... | Prentiss |
| Williams, W. B..... | Jefferson Davis..... | Prentiss |

GENERAL SCIENCE COURSE.

| | | |
|-------------------------|-----------------|----------------|
| Abbott, E., Jr..... | Oktibbeha..... | Starkville |
| Archer, J. M., Jr..... | Leflore..... | Schlater |
| Barbarin, A. E..... | Quitman..... | Marks |
| Barbarin, J. T..... | Quitman..... | Marks |
| Brandt, B. B..... | Harrison..... | Pass Christian |
| Bryan, W. J..... | Carroll..... | Carrollton |
| Davis, P. D..... | Lauderdale..... | Meridian |
| Dixon, S. E..... | Yazoo..... | Vaughn |
| Evans, M. P..... | Clarke..... | Quitman |
| Farish, G. C..... | Carroll..... | Sidon |
| Ferrell, C. B..... | Benton..... | Ashland |
| Jones, E. E..... | *Louisiana..... | Mer Rouge |
| Kleban, L..... | Oktibbeha..... | Starkville |
| Lilly, V. K..... | Lee..... | Tupelo |
| Luster, G. W., Jr. | Hinds..... | Edwards |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|-------------------------|-----------------|-------------|
| Maloney, J. O..... | Lauderdale..... | Meridian |
| Middleton, J. E..... | Lincoln..... | Wesson |
| Middleton, R. E..... | Lincoln..... | Wesson |
| Pleasants, E. R..... | Leflore..... | Minter City |
| Powell, J. C..... | *Alabama..... | Bay Minette |
| Reagan, C. H..... | Yazoo..... | Benton |
| Shackleford, B. C..... | Madison..... | Canton |
| Smith, G. K..... | Sunflower..... | Indianola |
| Smith, J. C..... | Bolivar..... | Benoit |
| Topp, W. D..... | Lee..... | Tupelo |
| Vincent, G. S..... | Washington..... | Greenville |
| Wiggins, B. B., Jr..... | Hinds..... | Jackson |
| Williams, G. H..... | Oktibbeha..... | McLaine |
| Young, W. T..... | Leflore..... | Minter City |

TWO YEAR AGRICULTURAL COURSE.

| | | |
|--------------------------|-------------------|----------------------|
| Adams, S..... | Choctaw..... | Ackerman |
| Baker, H. G..... | Rankin..... | Brandon |
| Boyce, H. B..... | Tallahatchie..... | Glendora |
| Brown, W. H., Jr..... | Issaquena..... | Addie |
| Chandler, R. C..... | Madison..... | Canton |
| Chapin, A. S..... | Oktibbeha..... | Starkville |
| Chiles, J. T., Jr..... | Oktibbeha..... | Starkville |
| DeMarchi, L. A..... | Lauderdale..... | Meridian |
| Dinkins, C. C., Jr..... | Madison..... | Canton |
| Easley, R. W..... | Pike..... | Magnolia |
| Grantham, A. G..... | Covington..... | Collins |
| Hays, C. G..... | Harrison..... | Long Beach |
| Hearte, W. H..... | *Louisiana..... | Gallion |
| Hobbs, F. M..... | Holmes..... | Lexington |
| Hogan, J. N..... | Coahoma..... | Clarksdale |
| Holmes, J. W..... | Montgomery..... | Winona |
| Huff, R. W. P..... | Alcorn..... | Corinth |
| Jeffreys, O. W..... | Bolivar..... | Hussockena |
| Jennings, W. J., Jr..... | Oktibbeha..... | Agricultural College |
| Kearney, E. W..... | Leflore..... | Money |
| Lea, H. L..... | Amite..... | Liberty |
| Lewis, J. A..... | Oktibbeha..... | Starkville |
| Love, E. W..... | Forrest..... | Hattiesburg |
| Lutrick, H. G..... | Madison..... | Flora |
| McCloud, O. F..... | Coahoma..... | Paradise |
| McCloud, W. C..... | Coahoma..... | Paradise |
| Mingee, H. C..... | Jefferson..... | Church Hill |
| Mingee, J. C..... | Adams..... | Pine Ridge |
| Pearson, M. T..... | Grenada..... | Grenada |
| Pentecost, J. P..... | Carroll..... | Carrollton |
| Powell, C..... | Lauderdale..... | Lauderdale |
| Robinson, G. J..... | Rankin..... | Pelahatchie |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|---------------------|-------------------|-------------|
| Segrist, A. D..... | Jefferson..... | Clarke |
| Segrist, A. D..... | Jefferson..... | Clarke |
| Smith, J. C..... | Bolivar..... | Benoit |
| Spruill, Q. D. | Madison..... | Canton |
| Stevens, J. M..... | Perry..... | New Augusta |
| Sullivan, W. W..... | Tallahatchie..... | Webb |
| Watson, W. M..... | Washington..... | Greenville |
| Webb, C. D..... | Tallahatchie..... | Sumner |
| Williamson, F..... | *Tennessee..... | Mason |
| Withers, J. W..... | *Tennessee..... | Memphis |

SPECIAL MECHANICAL ENGINEERING COURSE.

| | | |
|--------------------|---------------|-----------------|
| Canty, F. S..... | Jackson..... | Pascagoula |
| Griffin, S. S..... | Yazoo..... | Yazoo City |
| Johnson, E. L..... | Harrison..... | Biloxi |
| McPhate, S. D..... | Adams..... | Natchez |
| Paulk, L. R..... | Lee..... | Verona |
| Tircuit, E. T..... | Hancock..... | Bay St. Louis |
| Weathersby, M..... | Copiah..... | Crystal Springs |

SPECIAL AGRICULTURE.

| | | |
|--------------------|---------------|------|
| Stevens, A. L..... | Itawamba..... | Clay |
|--------------------|---------------|------|

SPECIAL DAIRYING.

| | | |
|-----------------|-------------|---------------|
| East, E. A..... | Tippah..... | Blue Mountain |
|-----------------|-------------|---------------|

INDUSTRIAL AND TRAINING COURSES.

| | | |
|-----------------------|-------------------|----------------------|
| Alford, D. T..... | Pike..... | Magnolia |
| Ball, W. M..... | Pike..... | Tylertown |
| Bacot, A. L..... | Pike..... | Ruth |
| Barrett, J. D..... | Kemper..... | Preston |
| Beatty, J. A..... | Simpson..... | D'Lo |
| Beck, M. M..... | Sunflower..... | Drew |
| Blakeman, H. W..... | Yazoo..... | Vaughn |
| Blair, J. C..... | *Tennessee..... | Collierville |
| Blackwell, C. W..... | Lafayette..... | Water Valley |
| Black, H. H..... | Itawamba..... | Middleton |
| Bostic, W. E..... | Lee..... | Saltillo |
| Boyd, A. E..... | Pike..... | Tylertown |
| Boyd, F. H..... | Pike..... | McComb City |
| Bond, R. E..... | Pike..... | Osyka |
| Boyd, J. O..... | Pike..... | Nome |
| Braswell, S. P..... | Scott..... | Harpersville |
| Brown, J. D..... | Oktibbeha..... | Bradley |
| Brunson, L. L..... | Oktibbeha..... | Agricultural College |
| Butler, F. D..... | Oktibbeha..... | Sturgis |
| Burkhalter, T. F..... | Tallahatchie..... | Enid |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|-------------------|-----------------|----------------------|
| Cagle, F. | Choctaw | Ackerman |
| Caldwell, D. D. | Leake | Carthage |
| Cash, S. C. | Bolivar | Beulah |
| Carpenter, H. H. | Oktibbeha | Sessums |
| Carter, A. B. | Sunflower | Drew |
| Casanova, W. X. | Hancock | Logtown |
| Childress, R. D. | Lafayette | Harmontown |
| Cork, O. F. | Choctaw | Ackerman |
| Craddock, E. Lee | Lowndes | Columbus |
| Crawford, D. D. | Monroe | Okolona |
| Crow, M. T. | Oktibbeha | Starkville |
| Curet, C. M. | Hancock | Fenton |
| Daniel, C. E. | Sunflower | Drew |
| Davis, J. T. | Calhoun | Sabougla |
| Dinkins, C. C. | Madison | Canton |
| Deen, E. W. | Jefferson Davis | Bassfield |
| Demarchi, L. A. | Lauderdale | Meridian |
| Drake, C. F. | Attala | West |
| Edwards, W. M. | Coahoma | Lula |
| Epperson, A. I. | Washington | Percy |
| Epperson, W. C. | Washington | Percy |
| Ethridge, R. J. | Kemper | Battlefield |
| Finn, J. W. | Harrison | Gulfport |
| Fitzgerald, A. P. | Panola | Crenshaw |
| Fitzgerald, J. M. | Starkville | Agricultural College |
| Foster, W. T. | Lawrence | Sontag |
| Frasier, J. J. | Leflore | Swiftown |
| Freeman, J. P. | Webster | Maben |
| Fuente, A. R. | Hancock | Fenton |
| Ginn, A. J. | Pike | Tylertown |
| Giffin, J. W. | Winston | Louisville |
| Giffin, T. T. | Winston | Louisville |
| Giffin, F. H. | Winston | Louisville |
| Goodin, H. C. | Winston | Fern Springs |
| Gould, A. N. | *Louisiana | Ashwood |
| Gould, E. H. | *Louisiana | Ashwood |
| Gould, M. E. | *Louisiana | Ashwood |
| Gray, R. W. | Wayne | Waynesboro |
| Greer, R. R. | Lincoln | Bogue Chitto |
| Gulledge, W. E. | Pike | Magnolia |
| Harmon, S. A. | Monroe | Amory |
| Hays, E. G. | Harrison | Long Beach |
| Henderson, L. D. | Kemper | Preston |
| Hennesy, C. C. | *Louisiana | Frank |
| Henry, R. R. | Oktibbeha | Sturgis |
| Howell, R. G. | Adams | Natchez |
| Howell, H. G. | Copiah | Crystal Springs |
| Howington, R. P. | Neshoba | Neshoba |
| Hunt, S. H. | Choctaw | McCool |
| Kenelly, J. W. | Marion | Darburn |
| Lammons, J. B. | Yazoo | Yazoo City |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|---------------------|------------|--------------|
| Linch, M. L. | Choctaw | Weir |
| Lipe, E. E. | Carroll | Carrollton |
| Lindsey, B. F., Jr. | Lafayette | Tula |
| Lewis, L. O. | Oktibbeha | Starkville |
| Lewis, J. A. | Oktibbeha | Starkville |
| Lofton, J. | Lincoln | Ollie |
| Lowe, E. P. | Lafayette | Oxford |
| Lutkin, A. | Hancock | Logtown |
| Malone, R. B. | Holmes | Ebenezer |
| Martin, R. L. | Warren | Oak Ridge |
| Martin, W. A. | Warren | Oak Ridge |
| Maufray, C. A., Jr. | Hancock | Fenton |
| Maxwell, J. D. | Oktibbeha | Starkville |
| McCreight, W. B. | Oktibbeha | Starkville |
| McIntosh, A. | Itawamba | Ratliff |
| McClain, W. E., Jr. | Lowndes | Columbus |
| McKenzie, S. L. | Pike | Tylertown |
| McLaurin, C. A. | Kemper | Cullum |
| McCormick, H. P. | Lincoln | Bogue Chitto |
| McSwain, U. C. | Perry | New Augusta |
| Merkel, E. E. | Forrest | Hattiesburg |
| Miller, A. P. | Oktibbeha | Cedar Bluff |
| Mobley, C. B. | Hinds | Utica |
| Mooney, R. J. | Lauderdale | Russell |
| Neal, H. I. | Chickasaw | Van Vleet |
| Nelson, L. F. | Lamar | Lumberton |
| Norwood, J. R., Jr. | Covington | Collins |
| Perkins, J. M. | Lincoln | Brookhaven |
| Poe, W. N. | Bolivar | Dahomy |
| Pou, W. M. | Wayne | Waynesboro |
| Prince, A. J. | Tunica | Maud |
| Prime, A. J. | Tunica | Maud |
| Rainer, B. S. | Yazoo | Benton |
| Rainey, D. W. | Oktibbeha | Sturgis |
| Rainey, S. M. | Lowndes | Mayhew |
| Rea, R. H. | Kemper | Gholston |
| Reed, A. S. | Winston | Fern Springs |
| Reynolds, O. B. | Alcorn | Kossuth |
| Roberts, E. C. | Monroe | Clay |
| Rimes, J. C. | Pike | Magnolia |
| Rutland, W. S. | Covington | Collins |
| Sanders, G. D., Jr. | Lowndes | Columbus |
| Smith, I. F. | Pike | Magnolia |
| Smith, B. F. | Lauderdale | Meridian |
| Smith, B. | Franklin | Lucien |
| Smith, W. W. | *Tennessee | Memphis |
| Stampley, R. U. | Yazoo | Kearney |
| Stevenson, D. E. | Choctaw | McCool |
| Stewart, W. C. | Noxubee | Crawford |
| Stringfellow, G. E. | George | Shipman |
| Stringfellow, T. E. | George | Shipman |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|----------------------|-------------------|----------------|
| Swann, F. O..... | Adams..... | Briers |
| Tartt, A. B..... | Kemper..... | DeKalb |
| Thomas, B. W..... | DeSoto..... | Lake Cormorant |
| Thomas, W. R..... | Neshoba..... | Philadelphia |
| Thomasson, O. M..... | Union..... | Blue Springs |
| Thornhill, J. R..... | Pike..... | Mesa |
| Tingle, C. N..... | Carroll..... | Greenwood |
| Tomlinson, J..... | Oktibbeha..... | Sessums |
| Travis, Z. T..... | Amite..... | Peoria |
| Turner, B. H..... | Choctaw..... | Ackerman |
| Turner, J. B..... | Noxubee..... | Mashulaville |
| Vance, E. E..... | Kemper..... | Battlefield |
| Watkins, A. B..... | Noxubee..... | Gholson |
| Watkins, P. M..... | Noxubee..... | Gholson |
| Watkins, R. R..... | Noxubee..... | Gholson |
| Watkins, C. O..... | Tallahatchie..... | Sumner |
| Watson, G. C..... | Leflore..... | Itta Bena |
| Watson, W. H..... | Leflore..... | Itta Bena |
| Wahl, J..... | *Florida..... | Maitland |
| West, R. L..... | Wayne..... | Waynesboro |
| Whitmire, M. E..... | Choctaw..... | McCool |
| Whitmire, W. B..... | Choctaw..... | McCool |
| Wilson, S. C..... | Tunica..... | Dundee |
| Wiseman, W. R..... | Pontotoc..... | Blue Springs |
| Wofford, T. D..... | Webster..... | Dancy |
| Woody, C. O..... | Marshall..... | Mount Pleasant |
| Welch, J. S..... | Covington..... | Collins |

PRACTICAL WORKING BOYS' COURSE.

| | | |
|----------------------|------------------|-------------|
| Allen, R. J..... | Franklin..... | Odenburg |
| Bennett, G. G..... | Winston..... | Louisville |
| Bates, E. R..... | Pearl River..... | Picayune |
| Bessonett, G. E..... | Lincoln..... | Brookhaven |
| Bounds, J. E..... | Kemper..... | Moscow |
| Briscow, C. L..... | Greene..... | Leakesville |
| Bickham, C. B..... | Pike..... | Osyka |
| Boyd, J. T..... | Pike..... | Tylertown |
| Buie, W. M..... | Lincoln..... | Brookhaven |
| Carroll, W. H..... | Clay..... | West Point |
| Carsley, L. A..... | Hinds..... | Pocahontas |
| Causey, F. L. S..... | Amite..... | Liberty |
| Chandler, W. L..... | Lauderdale..... | Meridian |
| Chadwick, J. G..... | Carroll..... | Winona |
| Cochran, L. L..... | Pontotoc..... | Belden |
| Cook, C. E..... | *Arkansas..... | Helena |
| Cook, M..... | Amite..... | Gillsburg |
| Cotton, C. L..... | Forrest..... | Hattiesburg |
| Cothorn, L. C..... | Pike..... | Holmesville |

*Outside the State.

| NAME. | COUNTY. | POSTOFFICE. |
|------------------------|-----------------|----------------------|
| Durham, M. B..... | Tippah..... | Blue Mountain |
| Duncan, M. J..... | Pike..... | Enon |
| Fortinberry, A. E..... | Pike..... | Osyka |
| Fortinberry, F. L..... | Pike..... | Osyka |
| Giffin, F. H..... | Winston..... | Louisville |
| Ginn, M..... | Pike..... | Dunbar |
| Ginn, S. W..... | Pike..... | Tylertown |
| Greer, A. H..... | Lincoln..... | Bogue Chitto |
| Hill, R. H..... | Oktibbeha..... | Agricultural College |
| Hood, B. L..... | Webster..... | Walthall |
| Little, A..... | Copiah..... | Carpenter |
| Little, R. D..... | Copiah..... | Carpenter |
| Little, E. B..... | Copiah..... | Carpenter |
| Little, R..... | Copiah..... | Carpenter |
| Long, R. L..... | Carroll..... | Winona |
| Johnson, O. S..... | Monroe..... | Aberdeen |
| Lindsey, J. T..... | Harrison..... | Long Beach |
| Martin, F. A..... | Rankin..... | Pelahatchie |
| Maloney, J. O..... | Lauderdale..... | Meridian |
| McAfee, J. R..... | Kemper..... | DeKalb |
| McArthur, D..... | Harrison..... | McHenry |
| McCurley, L. E..... | Wilkinson..... | Rosetta |
| McDaniel, A. F..... | Pike..... | Magnolia |
| McDaniel, M. C..... | Pike..... | Osyka |
| McKenzie, J. D..... | Covington..... | Seminary |
| McMurray, H. P..... | Wilkinson..... | Turnbull |
| McNeely, J. C..... | Wilkinson..... | Woodville |
| McIntosh, T. L..... | Amite..... | Ola |
| Miller, C. A..... | Lee..... | Saltillo |
| Miller, M. C..... | Neshoba..... | Philadelphia |
| Mills, W. A..... | Choctaw..... | Weir |
| Muncy, W. D..... | Lincoln..... | Brookhaven |
| O'Brien, H. L..... | | |
| Philpot, W. L..... | Lee..... | Saltillo |
| Quinn, P. P..... | Pike..... | Magnolia |
| Reeves, G. W..... | Pike..... | McComb City |
| Reeves, Z. W..... | Lincoln..... | Bogue Chitto |
| Rains, D. E..... | Oktibbeha..... | Starkville |
| Simmons, V. A..... | Lincoln..... | Wesson |
| Sterling, N..... | Amite..... | Liberty |
| Sterling, W. W..... | Amite..... | Liberty |
| Sumners, V. A..... | Lincoln..... | Wesson |
| Thigpen, A. E..... | Hancock..... | Nicholson |
| Thigpen, C. M..... | Hancock..... | Nicholson |
| Thigpen, W. L..... | Hancock..... | Nicholson |
| Tingle, L. H..... | Leflore..... | Greenwood |
| Toombs, H. L..... | Holmes..... | Pickens |
| Woodward, K. V..... | Harrison..... | Long Beach |
| Underwood, E. E..... | *Texas..... | San Antonio |
| Wilson, C. D..... | Monroe..... | Aberdeen |
| Wilson, C. E..... | Monroe..... | Aberdeen |

*Outside the State.

UNCLASSIFIED.

| | | |
|---------------------|----------------|---------------|
| Bennett, W. C..... | Forrest..... | Hattiesburg |
| Black, H. A..... | Ittawamba..... | Nettleton |
| Coffey, T. B..... | Marshall..... | Holly Springs |
| Egger, W..... | Monroe..... | Hamilton |
| Gallegly, C. R..... | Lafayette..... | Oxford |
| Love, R. E..... | Monroe..... | Amory |
| Malone, R. B..... | | |

SUMMARY.

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| Graduate Students..... | 20 |
| Agricultural Seniors..... | 66 |
| Engineering Seniors..... | 49 |
| Pedagogical Seniors..... | 23 |
| Textile Seniors..... | 2 |
| Agricultural Juniors..... | 97 |
| Engineering Juniors..... | 49 |
| Pedagogical Juniors..... | 13 |
| General Science Juniors..... | 20 |
| Agricultural Sophomores..... | 118 |
| Engineering Sophomores..... | 52 |
| Pedagogical Sophomores..... | 28 |
| General Science Sophomores..... | 13 |
| Agricultural Freshmen..... | 120 |
| Engineering Freshmen..... | 90 |
| Pedagogical Freshmen..... | 18 |
| General Science Freshmen..... | 29 |
| Two Year Agriculture Course..... | 42 |
| Special Mechanical Engineering Course..... | 7 |
| Special Agriculture..... | 1 |
| Special Dairying..... | 1 |
| Industrial and Training Courses..... | 149 |
| Practical Working Boys..... | 71 |
| Unclassified..... | 7 |
| Total Attendance..... | 1,086 |

DEGREES CONFERRED, 1913.

MASTER OF SCIENCE.

| NAME. | STUDY. |
|--------------------|-----------------------|
| Beal, J. M..... | Agriculture. |
| Butts, A. B..... | Industrial Education. |
| Gladney, T. G..... | Civil Engineering. |
| Pate, H. O..... | Agriculture. |
| Vaughn, J. R..... | Industrial Education. |

BACHELOR OF SCIENCE. AGRICULTURAL COURSE.

| NAME. | POSTOFFICE. |
|-------------------------------------|-----------------------|
| Armstrong, B. E..... | Renova. |
| Barrentine, E. S..... | Itta Bena. |
| Bowen, W. R..... | Sardis. |
| Butler, E..... | Starkville. |
| Critz, A..... | Starkville. |
| English, M. L..... | Aberdeen. |
| French, H. O..... | Hamburg. |
| Guerry, N. D..... | Artesia. |
| Harrison, B..... | Columbus. |
| Harrison, L..... | Columbus. |
| Hester, J. W..... | Hazlehurst. |
| Kirkpatrick, J. H..... | Plattsburg. |
| Lipe, R. E..... | Vance. |
| Lamb, J..... | Union Church. |
| McCluer, D..... | Jackson. |
| Mercier, D..... | Beauregard. |
| Miller, M. E..... | Holly Springs. |
| Mingee, G. C..... | Church Hill. |
| Mingee, W. M..... | Church Hill. |
| Mitchell, F..... | Sanford. |
| Overstreet, C. A..... | DeKalb. |
| Roberds, E. S..... | Quincy. |
| Scott, A..... | Mantee. |
| Scott, J. W..... | Lorman. |
| Sides, L. M..... | Moscow, Tennessee. |
| Spinks, A. G..... | Daleville. |
| Solomon, H..... | Greenville. |
| Tate, W. B..... | Osyka. |
| Terry, A. E. (of Class '12)..... | Agricultural College. |
| Thompson, E. T. (of Class '12)..... | Harpersville. |
| Treloar, J. C..... | Taylor. |
| Thomae, E. D..... | Fayette. |

ENGINEERING COURSE.

| | |
|--------------------------------------|--------------|
| Anderson, E. C..... | Centerville. |
| Baird, C. O. (of class of 1912)..... | West Point. |
| Bethea, R. O..... | Sumrall. |
| Brading, R. A..... | Gunnison. |

| NAME. | POSTOFFICE. |
|--|---------------------|
| Brogan, W. (of class of 1912)..... | West Point. |
| Cole, G. H..... | Yazoo City. |
| Conoway, J. E..... | Memphis, Tennessee. |
| Gilleland, R. V..... | Stonewall. |
| Hogan, J. B..... | Starkville. |
| Huff, S. P..... | Centreville. |
| Jordan, F. L..... | Lexington. |
| Lucas, E. L., Jr..... | Kosciusko. |
| Margolis, D. (of class of 1912)..... | Starkville. |
| Middleton, W. G..... | Hazlehurst. |
| Neilson, H. H..... | Lexington. |
| Rogers, J. R..... | Ora. |
| Thrower, T. B. (of class of 1912)..... | Mayhew. |
| Tinsley, C. M..... | Jackson. |
| Swain, J. H..... | New Albany. |
| Watson, E. L..... | Seminary. |
| Whittaker, J. D.e..... | Natchez. |

PEDAGOGICAL COURSE.

| | |
|-------------------------------------|-----------------------|
| Caldwell, H. M..... | McCool. |
| Dove, W. E..... | Hamburg. |
| Fowler, Miss Susette..... | Starkville. |
| Gladney, Miss Hortense..... | Starkville. |
| Gunn, Miss Mabel..... | Starkville. |
| Graham, F. C..... | Waynesboro. |
| Harden, J. C..... | McCool. |
| Hightower, G. B..... | Agricultural College. |
| Horn, D. T. (of class of 1910)..... | Bay Springs. |
| McGehee, T. F..... | Little Springs. |
| Majure, J. E..... | Dixon. |
| Mingee, E. W..... | Church Hill. |
| Nash, H. E..... | Kosciusko. |
| Owens, W. A..... | Tishomingo. |
| Walley, E. P..... | Richton. |
| Whittaker, F. H..... | Natchez. |
| Wootten, J. R..... | Brooksville. |

AWARDS, JUNE, 1913.

ALUMNI MEDAL.

For the Best Debate in the Junior Class.

PATTERSON, T. M. Pike County

MAGRUDER MEDAL.

For the Best Written Argument in the Sophomore Class.

COBB, E. Calhoun County.

DIALECTIC SOCIETY MEDALS.

Prize Declamation, Freshman and Sub-Freshman.

O'QUINN, C. L. Pike County.

Prize Debate, Sophomore.

HURST, F. J. Noxubee County.

PHILOTECHNIC SOCIETY MEDALS.

Prize Declamation, Freshman and Sub-Freshman.

LEWIS, T. J. Neshoba County.

Prize Debate, Sophomore.

CURET, A. B. Hancock County.

TRAINING COURSE SCHOLARSHIP MEDAL.

COEN, J. L. Pike County.

PROGRAM FOR COMMENCEMENT, 1914.

SUNDAY, MAY 31.

- 10:00 A. M.—Sermon by DR. T. W. LEWIS, Memphis, Tennessee.
8:30 P. M.—Sermon before the Young Men's Christian Association,
by DR. LEWIS.

MONDAY, JUNE 1, ALUMNI DAY.

- 10:00 A. M.—Junior Debate for Alumni Medal.
4:30 P. M.—Regimental Parade.
8:30 P. M.—Alumni Annual Address, by DR. B. M. DUGGAR,
St. Louis, Missouri.

TUESDAY, JUNE 2, SENIOR DAY.

- 10:00 A. M.—Addresses by Representatives of the Senior Class.
ARNOLD, W. A.: "The Teacher as a Leader."
BRIEN, J. N.: "The Function of the Agricultural High
School."
CLARDY, W. J.: "Electricity in the Industrial Development
of the South."
GREER, S. J.: "The Maintenance of Permanent Agriculture."
JACOBS, R. D.: "The Relation of Industrial Education to
Citizenship."
WILKINSON, R. E.: "The Efficiency Engineer."
Delivery of Medals.
8:30 P. M.—Senior Class Exercises.

WEDNESDAY, JUNE 3, COMMENCEMENT DAY.

- 10:30 A. M.—Annual Address by HONORABLE FINIS J. GARRETT,
Member of Congress from Tennessee—Washington, D. C.
Delivery of Diplomas.

CALENDAR FOR 1914-1915.

| | |
|---|------------------------|
| Session begins..... | September 16, 1914. |
| Entrance Examinations, Matriculation, and Registration for the First Term..... | September 16-19, 1914. |
| Thanksgiving Day Recess..... | November 26, 1914. |
| Christmas Holidays begin..... | December 23, 1914. |
| Second Term begins..... | January 4, 1915. |
| R. E. Lee's Birthday—half holiday..... | January 19, 1915. |
| Lincoln's Birthday—half holiday..... | February 12, 1915. |
| Washington's Birthday—half holiday..... | February 22, 1915. |
| Third Term begins..... | March 14, 1915. |
| Annual Field Day | April 1, 1915. |
| Commencement Sermon..... | May 30, 1915. |
| Annual Address and Delivery of Diplomas..... | June 2, 1915. |

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